ANNUAL PROCESSING REVIEW NUMBER

AMERICAN

DYESTUFF REPORTER

NORMAN A. JOHNSON
Editor

CHARLES A. WHITEHEAD
Managing Editor

MYRON D. REESER
Business Manager

HERBERT A. STAUDERMAN
Advertising Manager

JAMES A. DOYLE
Promotion Manager

GRACE B. BURTON
Production Manager

LILLIAN M. THOMPSON
Circulation Manager

Official Publication of the Proceedings of the American Association of Textile Chemists and Colorists

American Dyestuff Reporter was founded in 1917 and the Textile Colorist and Converter (formerly Textile Colorist) was incorporated with it in January, 1949. Published every other Monday by the **HOWES PUBLISHING COMPANY, INC., 44 E. 23rd Street, New York 10, N. Y. C R Howes,** President; **Ernest J Finan,** Executive Vice-President; **Norman A Johnson,** Vice-President & Treasurer; **Myron D Reeser,** Vice-President; **C Essenbreis,** Secretary

Also Publishers of
HOSIERY INDUSTRY WEEKLY
HOSIERY MERCHANDISING

December 8, 1952
VOLUME 41 NUMBER 25

Contents

Contents of previous issues can be found by consulting the Industrial Arts Index and the Engineering Index, Inc. at your library

• Special Articles

Alphabetical List of New Products Developed Since November, 1951 795

Highlights of the Past Year 839

• Departments

News 849
P J Wood

• Proceedings of the American Association of Textile Chemists and Colorists

Calendar P841

Employment Register P841

WNE Meeting Notice P841

Report of Southwest Section Outing P842

Membership Applications P843

Philadelphia and South Central Sections:—
Some Practical Procedures for Dyeing Cotton and for the High-Temperature Dyeing of Synthetic Fibers P844
Alexander P Roy

Meeting Report—FDC Student Chapter P846

New York Section Meeting Report P848

Copyright, 1952, Howes Publishing Co., Inc.

when you use

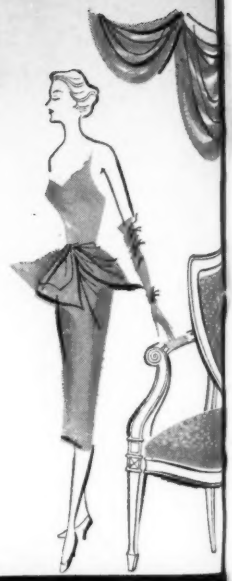
Superlitefast®

direct dyes

on rayons, mixed fabrics and cottons,

everybody benefits, all along the line—

- **the dyer pleases the manufacturer**
- **the manufacturer pleases the store**
- **the store pleases the consumer**



Superlitefasts are the

fastest-to-light direct dyes known!

ALTHOUSE

Chemical Company, Inc.

READING, PENNSYLVANIA

pace-setter in precision dye-making

WIT
te
equipme
product
market
of produ
cations
alphabe
manufac
below t
viated n
to the
below v
manufac
address.

AMALG
and C
AMERI
50 Un
AMERI
Main
AMERI
93 W
AMERI
strum
ANALY
ment
ANDER
N J
ARKAN
Newa
ARNOL
Cana

Annual Processing Review Number

AMERICAN

DYESTUFF REPORTER

VOLUME 41 | DECEMBER 8, 1952 | NUMBER 25

Alphabetical List of

NEW PRODUCTS

Developed Since November, 1951

DYESTUFFS AND PIGMENTS • TEXTILE CHEMICALS

EQUIPMENT

WITH the cooperation of manufacturers of dyestuffs, textile chemicals, and wet processing and laboratory equipment, we have prepared the accompanying list of products which, it is understood, have been placed on the market or further developed since November, 1951. The list of products has been subdivided according to the classifications mentioned and the individual products are listed in alphabetical order (except for equipment). The name of the manufacturer, in an abbreviated form, appears directly below the name of the product. In many cases the abbreviated name of the manufacturer will immediately indicate to the reader the full name of the company. However, below we have listed alphabetically the key name of the manufacturer together with the complete firm name and address.

We have tried to make this list as complete and accurate as possible but there may be some unintentional omissions or errors. If so, we shall be pleased to have such matters brought to our attention immediately. We have depended upon the manufacturers to supply us with a complete list of their new products together with information concerning them. The properties claimed for these products are those claimed by the manufacturers. The information which we publish is necessarily in a brief form inasmuch as lack of space prohibits the publication of complete details concerning any product. We hope, however, that the information as it appears is sufficiently comprehensive to give the reader a specific idea of the properties and intended uses of the product.

KEY TO MANUFACTURERS' NAMES

AMALGAMATED—Amalgamated Chemical Corp, Rorer and Ontario Sts, Philadelphia 34, Pa

AMERICAN ANILINE—American Aniline Products, Inc, 50 Union Square, New York 3, N Y

AMERICAN DYEWOOD—American Dyewood Company, Main & Joralemon Sts, Belleville 9, N J

AMERICAN HARD RUBBER—American Hard Rubber Co, 93 Worth St, N Y 13, N Y

AMERICAN OPTICAL—American Optical Company, Instrument Division, Buffalo 15, N Y

ANALYTICAL MEASUREMENTS—Analytical Measurement, Inc, Chatham, N J

ANDERS—Anders Chemical Company, East Rutherford, N J

ARKANSAS—Arkansas Company, Inc, P O Box 210, Newark 1, N J

ARNOLD, HOFFMAN—Arnold, Hoffman & Co, Inc, 55 Canal Street, Providence 1, R I

ATCO—Atlantic Chemical Co, Inc, 2072 Smith Street, Centredale 11, R I

ATLANTIC POWDERED METALS—Atlantic Powdered Metals, Inc, 38 Park Row, New York 7, N Y

ATLANTIC REFINING—The Atlantic Refining Company, Chemical Products Sales, 260 South Broad St, Philadelphia 1, Pa

AULA—Aula Chemicals, Inc, P O Box 494, 714 Division St, Elizabeth, N J

BARNSTEAD—Barnstead Still & Sterilizer Co, 2 Lanesville Terrace, Forest Hills, Boston 31, Mass

BARRENCO—Barrington Engineering Corp, 110 West 40th St, New York 36, N Y

BECCO—Buffalo Electro-Chemical Co, Inc, Station B, Buffalo 7, N Y

BERG—Charles W Berg Laboratories, 1827 North 5th Street, Philadelphia 22, Pa

BERKSHIRE—Berkshire Color & Chemical Co, Pine and Cherry Sts, Delawanna, N J
BICK—Bick & Co, Inc, Reading, Pa
BURKART-SCHIER—Burkart-Schier Chemical Company, Chattanooga, Tennessee
CALCO—Calco Chemical Division, American Cyanamid Company, Bound Brook, New Jersey
CARBIDE AND CARBON—Carbide and Carbon Chemicals Company, A Division of Union Carbide and Carbon Corporation, 30 East 42nd Street, New York 17, N Y
CAROLINA—The Carolina Aniline & Extract Company, P O Box 2386, Charlotte 1, N C
CATALIN—Catalin Corporation of America, One Park Avenue, New York 16, N Y
CHARLOTTE—Charlotte Chemical Laboratories, Charlotte 1, N C
CIBA—Ciba Company, Inc, 627 Greenwich Street, New York 14, N Y
COLGATE—Colgate-Palmolive-Peet Company, 105 Hudson Street, Jersey City 2, N J
COLLOIDS—Colloids, Inc, 394-8 Frelinghuysen Avenue, Newark 5, N J
COLTON—The Colton Chemical Company, 1545 East 18th Street, Cleveland 14, O
CONTINENTAL—Continental Chemical Co, 195 Twenty-First Avenue, Paterson, N J
COOPER HEWITT—Cooper Hewitt Electric Company, 720-732 Grand St, Hoboken, N J
CROWN—Crown Chemical Corporation, 240 India Street, Providence 3, R I
DEXTER—Dexter Chemical Corporation, 819 Edgewater Road, New York 59, N Y
DU PONT—E I du Pont de Nemours & Co, Inc, Wilmington, Del
EMKAY—Emkay Chemical Company, 319-325 Second Street, Elizabeth, N J
ENLEY—Enley Products Co, 254 Pearl St, New York 38, N Y
FANCOURT—W F Fancourt Co, 516-518 South Delaware Avenue, Philadelphia 47, Pa
FIELDEN—Fielden Instrument Corp, 2920 North 4th Street, Philadelphia 33, Pa
FISHER—Fisher Scientific Co, 717 Forbes St, Pittsburgh 19, Pa
GALLOWHUR—Gallowhur Chemical Corporation, 801 Second Ave, New York 17, N Y
GEIGY—Geigy Company, Inc, 89-91 Barclay Street, New York 8, N Y
GENERAL DYESTUFF—General Dyestuff Corporation, 435 Hudson Street, New York 14, N Y
GENERAL SCIENTIFIC—General Scientific Equipment Co, 27th & Huntingdon Sts, Phila 32, Pa
GESSNER—David Gessner Company, 41 Fremont Street, Worcester 3, Mass
GLOBE—Globe Laboratories, Sherman Oaks, Calif
GOODRICH—B F Goodrich Chemical Co, Rose Bldg, 2060 East Ninth St, Cleveland 15, O
GUARDIAN—Guardian Chemical Corporation, 10-15 43rd Ave, Long Island City 1, N Y
HERCULES—Hercules Powder Company, Wilmington, Del
HEYDEN—Heyden Chemical Corp, 342 Madison Ave, New York 17, N Y
HILTON-DAVIS—The Hilton-Davis Chemical Co, 2235 Langdon Farm Road, Cincinnati 13, Ohio
HUNTER—James Hunter Machine Company, North Adams, Mass
INSTRUMENT DEVELOPMENT—Instrument Development Laboratories Inc, 163 Highland Avenue, Needham Heights 94, Mass
INTERCHEMICAL—Interchemical Corporation, Textile Colors Division, Hawthorne, N J
JENKINS—M W Jenkins Sons, Inc, Cedar Grove, N J
LABLINE—Labline, Inc, 217 N Desplaines St, Chicago 6, Ill
LAUREL—Laurel Soap Manufacturing Co, Inc, Tioga, Thompson and Almond Sts, Phila 34, Pa
MAC—Mac Chemical Company, 5113 Kingston Pike, Knoxville, Tenn
MACBETH—Macbeth Corporation, P O Box 950, Newburgh, N Y
MATHIESON—Mathieson Chemical Corporation, Mathieson Building, Baltimore 3, Md
MAY—Otto B May, Inc, 198-214 Niagara Street, Newark 5, N J
MONA—Mona Industries, Inc, 65-75 East 23rd Street, Paterson 4, N J
MONSANTO—Monsanto Chemical Co, Merrimac Division, Everett Station, Boston 49, Mass
NATIONAL ANILINE—National Aniline Division, Allied Chemical & Dye Corporation, 40 Rector Street, New York 6, N Y
NATIONAL INSTRUMENT—National Instrument Co, 5005 Queensbury Ave, Baltimore 15, Md
NOVA—Nova Chemical Corporation, 147-153 Waverly Place, New York 14, N Y
NUODEX—Nuodex Products Co, Inc, Elizabeth F, N J
NYANZA—Nyanza Color & Chemical Co, Inc, 109 Worth Street, New York 13, N Y
ONYX—Onyx Oil & Chemical Co, Warren & Morris Streets, Jersey City 2, N J
ORGANIC—Organic Chemical Corporation, P O Box 432, Providence 1, R I
PAISLEY—Paisley Products, Inc, 630 West 51st Street, New York 19, N Y
PENFIELD—Penfield Manufacturing Co, High School Ave, Meriden, Conn
PFIZER—Chas Pfizer & Co, Inc, 630 Flushing Avenue, Brooklyn 6, N Y
PHARMA—Pharma Chemical Corp, 175 Fifth Avenue, New York 10, N Y
PHOTOVOLT—Photovolt Corporation, 95 Madison Avenue, New York 16, N Y
PROCTOR & SCHWARTZ—Proctor & Schwartz, Inc, Seventh Street and Tabor Road, Philadelphia 20, Pa
PROTEAN—Protean Chemical Corporation, 150 Nassau Street, New York 38, N Y
QUAKER—Quaker Chemical Products Corp, Conshohocken, Pa
REFINED—Refined Products Corporation, Lyndhurst, N J
RICHMOND—Richmond Oil, Soap & Chemical Co, Inc, 1041-1043 Frankford Ave, Philadelphia 25, Pa
ROHM & HAAS—Rohm & Haas Company, Washington Square, Philadelphia 5, Pa
RUTHERFORD—Rutherford Dye and Chemical Co, Inc, 189 Franklin Street, New York 13, N Y
SANDOZ—Sandoz Chemical Works, Inc, 61-63 Van Dam Street, New York 13, N J
SCHER—Scher Brothers, 519 Getty Avenue, Clifton, N J
SETHCO—Sethco, 70-78 Willoughby St, Brooklyn 1, N Y
STAHMER—F J Stahmer Shoe Co, 2349 Boise Avenue, Davenport, Iowa
STEIN, HALL—Stein, Hall & Company, Inc, 285 Madison Avenue, New York, N Y
SJOSTROM—Sjostrom Machine Co, Lawrence, Mass
STEWART PARKER—Stewart Parker Co, Pittsburgh, Pa
SYNTHRON—Synthron, Inc, Ryan Avenue, Ashton, R I
TENNESSEE EASTMAN—Tennessee Eastman Company, Division of Eastman Kodak Company, Kingsport, Tenn

TORSION—Torsion Balance Co, Clifton, N J
TRUMETER—Trumeter Co, 1265 Broadway, New York 1, N Y
TUBE-TEX—Tubular Textile Machinery Corp, 33-61 54th Street, Woodside, L I, N Y
ULTRA—Ultra Chemical Works, Inc, Wood and Shady Streets, Paterson, N J
ULTRA VIOLET—Ultra Violet Products, Inc, 145 Pasadena Ave, South Pasadena, Cal
VIKON—Vikon Chemical Company, 1384 Massachusetts Avenue, Cambridge 38, Mass
WARWICK—Warwick Chemical Company Division, Sun Chemical Corp, Wood River Jct, R I
JACQUES WOLF—Jacques Wolf & Co, Passaic, N J

DYES AND PIGMENTS

ACID ALIZARINE BLUE A CONC
(Nyanza)

Produces a bright greenish shade of blue on wool dyed from an acid bath. It also exhausts well from a neutral bath. Acid Alizarine Blue A Conc. is said to be characterized by its excellent fastness to light, good solubility and level dyeing properties. Furthermore, the shade remains unchanged under artificial light. It is stated that Acid Alizarine Blue A Conc. is an excellent color for dyeing nylon and is also highly recommended by the manufacturers for the dyeing of Orlon and Dynel.

ACID ANTHRACENE BROWN TBL-CF
(General Dyestuff)

A new straight chrome dyestuff for wool, which gives dyeings said to be characterized by superior fastness. The advantages of this new type over the other available chrome browns are said to be in versatility of application, in general excellence of fastness properties including fastness to light, fulling and carbonizing, and in maintenance of shade in artificial light. It is claimed that this product possesses a breadth of use in fast-color work that cannot be equaled by any other single brown.

AHCO NYLON BLACK 2DS
(Arnold, Hoffman)

A homogeneous dye of the acid dyeing class which produces full rich black shades on spun or filament nylon. The simplicity of the dyeing procedure and the generally good fastness properties of this dye, are said to make it particularly attractive.

AHCOQUINONE BLUE A2G
(Arnold, Hoffman)

A very level dyeing anthraquinone acid blue. It is said to have very good light fastness and good wet fastness. Useful as a self shade and also as a component of mode shades where best fastness to light, coupled with good wet fastness and level dyeing, is required.

AHCOQUINONE BLUE PFN
(Arnold, Hoffman)

A level dyeing anthraquinone acid blue said to possess good light fastness and fairly good wet fastness. Suitable for use as a self color or as a component of mode shades in mixtures of level dyeing acid colors on wool.

AHCOQUINONE CYANINE GREEN GN
(Arnold, Hoffman)

Similar to Ahcoquinone Cyanine Green G but has better neutral dyeing properties. It is said to be especially suitable for metachrome dyeing and the dyeing of blends of wool with cellulosic fibers. Reported to be an excellent dyestuff for nylon.

AHCOQUINONE CYANINE GREEN GS
(Arnold, Hoffman)

Similar in fastness properties to Ahcoquinone Cyanine Green G but is a little bluer in shade and has better solubility. This improved solubility makes it more suitable for package dyeing and printing.

AHCOQUINONE FAST GRAY BLN
(Arnold, Hoffman)

Similar to Ahcoquinone Fast Gray BBLW in fastness properties but is bluer in shade and has improved neutral dyeing properties. It is particularly suitable for metachrome dyeing and other uses where it is necessary to dye neutral or nearly neutral. It is said to have best light fastness for use in either chrome or acid milling combinations on wool. Also suitable for nylon.

AHCOVAT SOLUBLE DYES
(Arnold, Hoffman)

Ahcovat Soluble Green IB
Ahcovat Soluble Olive Green IBL
Ahcovat Soluble Pink IR
Ahcovat Soluble Brown IBR
Ahcovat Soluble Indigo O
Ahcovat Soluble Golden Yellow IGK
Ahcovat Soluble Golden Yellow IRK
Ahcovat Soluble Blue IBC

These are the first of a series of leuco esters of vat dyes introduced to the trade by Arnold, Hoffman & Company Inc.

ALCIAN BLUE 8GN 150
(Arnold, Hoffman)

A very bright greenish blue for production of fast to light and washing shades on cellulosic fibers. This is an improved brand of the dye by the same name formerly available. It has markedly improved solubility and as such it is suitable for package dyeing on cotton yarn as well as for pigment padding and printing.

ALGOSOL BROWN IRRD SUPRA
(General Dyestuff)

A water-soluble leuco ester of the straight thioindigo vat dyestuff Indanthrene Brown RRA Extra Suprafix (Pr 121). Like the dyestuff from which it has been derived, this Algosol is of first interest for printing reddish-brown shades of good tinctorial value on cotton, rayon and silk said to possess very good fastness properties. It is stated that Algosol Brown IRRD Supra is also important for dyeing wool when very superior fastness is demanded, and for dyeing cotton, rayon and union piece goods when penetration and solidity of shade are of primary consideration.

ALGOSOL GOLDEN YELLOW IRK
(General Dyestuff)

A water-soluble leuco ester of the straight anthraquinone vat dyestuff Indanthrene Golden Yellow RKA (Pr 292). Like the dyestuff from which it has been derived, this Algosol is of first interest for printing bright reddish-yellow shades said to be of good tinctorial value and superior fastness properties on cotton, rayon and silk. It is stated that it is also important for dyeing cotton, rayon and union piece goods when penetration and solidity of shade are of primary consideration and for dyeing wool when excellent fastness to both light and fulling

are desired. This yellow is of particular value in the production of tan and beige combinations to meet severe fastness requirements on all fibers, especially fastness to light.

ALIZARINE BLUE SEN EXTRA CF
(General Dyestuff)

A level-dyeing, anthraquinone type of acid dyestuff (listed under C I 1053) which, it is stated, has long been useful to the dyer because its bright, medium blue shades of very good light fastness differ from most other bright, fast-to-light, medium blues in turning greener and brighter in artificial light.

ALIZARINE FAST GREY N2B
(Nyanza)

A chrome acid grey said to be of excellent fastness to light. Dyes well from a neutral bath and may also be applied by the top chrome, nutrachrome and chrome bottom methods. It is said to have good fastness to sea water and perspiration and will stand medium fulling. This color is also particularly suitable for dyeing on union goods where fastness to light is of importance. It is particularly recommended by the manufacturers for dyeing upholstery for the automobile trade and household furnishings.

ALIZARINE FAST LIGHT BLUE C
(Ciba)

An acetic acid dyeing color of beautiful shade said to have good fastness to perspiration and decatizing. It dyes well neutral making it of interest for cotton and wool and viscose and wool unions. Can be used for brightening up chrome dyeings. It is claimed that its excellent fastness and good union dyeing properties make it of particular interest in the field of nylon-wool unions or all nylon fabrics. At low temperatures—100°F.—it stains silk much heavier than wool thus making it a valuable color in wool silk unions.

AMALAN* GREEN GL
(American Aniline)

A chromiferous type color, full toned and yellowish and suitable for the production of bottle greens, Forest greens, Hunter greens, etc. The color is said to level well and possess the very good fastness to light and wet processings which characterize this color group.

* Registered Trade Mark

AMALAN* ORANGE GL
(American Aniline)

A new clear toned, level dyeing orange of the chromiferous group which has been brought into production during the past year. Like all others of the Amalan range this product is said to have very good to excellent all around fastness and is applicable to wool yarn and fabrics as well as silk and nylon.

* Registered Trade Mark

AMALAN* RED GN
AMALAN* RED 2B
AMALAN* RED 3B
(American Aniline)

Recently added to an expanding line of chromiferous type dyes are the above three Amalan colors. Shades of these reds runs from moderately yellowish to bluish tone. They are said to offer a high degree of fastness to washing, perspiration, sea water, milling and light and are recommended for application to wool yarn and pieces from a sulfuric acid bath. Levelling quality is said to be very good; the GN and 3B shades are especially recommended for use on carbonized materials.

* Registered Trade Mark

AMANIL* SUPRA BLUE FBLL
(American Aniline)

This new member of the Amanil Supra series of direct dyes is said to be outstanding because of its excellent light fastness which, together with a rich, medium shade, is affected to a negligible degree by resin finish aftertreatments. It is stated that discharge is good as applied in light tones to cotton and rayon and the product is suitable for color discharge when dyed as a bright navy blue self shade.

* Registered Trade Mark

AMANIL* SUPRA RED 6BLL
(American Aniline)

A bluish shade of direct red said to be of very good light fastness, good washing, sea water and perspiration fastness. Like others in the Amanil Supra group, this item is well adapted to use with resin type finishes. The color is dischargeable to a clean white and applicable to cotton, rayon and silk as a base component for the production of maroons and wines as well as for shading purposes where its properties are demanded.

* Registered Trade Mark

AMANIL* SUPRA RUBINE BBL
(American Aniline)

This direct dyestuff is one of a new group which, it is claimed, because of outstanding light fastness and suitability for use with resin type finishes, is distinguished from the ordinary grade of direct dyeing colors. It is stated that superior resistance to salt and fresh water, perspiration and AATCC #2 washing further enhances its value for use on yarns, piece goods, ribbon work and hosiery. The color is suitable for the dyeing of silk as well as rayon and cotton.

* Registered Trade Mark

AMANIL* SUPRA YELLOW 2GLL
(American Aniline)

This valuable addition to the "Amanil Supra" line of fast to light direct colors offers a full, bright shade for use on rayon and cotton in every stage of manufacture. It is stated that its superior light fastness and shade tone are practically unaffected upon subjection to cationic, urea-formaldehyde and other resin type finishes. The color is said to have very good wash, perspiration, fresh and salt water fastness. It is not dischargeable.

* Registered Trade Mark

AMANTHRENE* BLACK BBN DOUBLE PASTE
(Colour Index #1102)
(American Aniline)

This vat dyestuff as applied by the normal vat procedures yields a dull green which, after oxidation, requires an intermediate treatment in a cold, chlorine bath or diazotization with nitrite and acid to produce a final, full black or, greys, in lighter percentages. It is stated that the color is particularly suited to pressure package machine dyeing and offers the usual high fastness ratings associated with vat dyes.

* Registered Trade Mark

AMANTHRENE* BROWN BR PASTE
(American Aniline)

Newly added to the Amanthrene vat line is this easily levelled, rich chocolate shade of brown which is claimed to be rated as of highest resistance to light, laundering, soda boil and other wet processings. It is stated that the color is very satisfactory for package dyeing by the pigment process, pad-jig and pad high-temperature units. Suitable for cotton or rayon by any of the normal dyeing procedures for yarn, hosiery or piece goods.

* Registered Trade Mark

AMANTHRENE* DIRECT BLACK DDB PASTE
(American Aniline)

A direct dyeing vat black applicable to cotton, rayon and cellulosic fibers by the normal vat procedures. No development other than the usual oxidation and soap-off treatment is required to produce full bloomy blacks. This item serves well as a shading color in combination shades or alone in light percentages to produce attractive bluish greys. As a full black, light fastness is said to be excellent, and wash fastness very good.

* Registered Trade Mark

AMANTHRENE* PRINTING BLACK PG DOUBLE PASTE
(American Aniline)

As its brand implies, this new improved product is of primary interest to print mills; specifically for heavy blotch patterns on drapery materials. The color is finely dispersed, of workable consistency and free of gritty substance. It is said to possess good light fastness and the all around resistance to color destruction expected in its color group.

* Trade Name

ARIBASE* POWDERS AND SOLUTIONS
(Interchemical)

New additions to Interchemical's line of stabilized azoic bases for use in printing cotton, spun rayon, and other fabrics include the following:

Aribase Red KBS Powder
Aribase Red KBS Single Solution
Aribase Red RCS Powder
Aribase Red RLS Powder
Aribase Blue BS Powder
Aribase Blue BS Single Solution

Aribase Powders and Solutions when combined with various Interchem® Napthols produce a wide range of brilliant shades identical in fastness to those obtained with stabilized azoic dyes of the Arigen type.

* Trade Name

ARIDYE® PIGMENT PRINTING COLORS
(Interchemical)

Two new resin-bonded pigment colors specially formulated for printing cotton, rayon, acetate, nylon, and other natural and synthetic fibers are Aridye Rubine FD3B and Aridye White NY. Ariyde Rubine FD3B makes possible the pigment printing of rich fuchsias and rubines that are said to be fast to light and washing, even in pastel shades. Aridye White NY is said to provide excellent opaque white on whites, white discharges, and white resists under Aniline Black. It is nonyellowing. Among many other advantages, it eliminates splits in printing Bemberg sheers.

ARIGEN® DYES
(Interchemical)

New additions to Interchemical's line of stabilized azoic dyes for printing cotton, spun rayon, and other fabrics include the following:

Arigen Red GNBS Single Solution
Arigen Red 3B Powder
Arigen Red SW Powder
Arigen Bordeaux MR Powder
Arigen Bordeaux RN Powder
Arigen Violet SW Powder
Arigen Blue P Powder
Arigen Blue P Single Solution

ARIGEN® PASTES
(Interchemical)

Arigen Pastes are Interchemical's new form of stabilized azoic dyes. They are the first stabilized azoic dyes to be offered in emulsion form. They have several definite advantages for the fast-color printing of cotton, spun rayon and other fabrics. Arigen Pastes were developed specifically for application by Interchemical's exclusive Aquadye® Emulsion method. They also can be applied in conventional gum thickeners. Major advantages of Arigen Pastes applied in Aquadye Emulsions are said to include: better hand, sharper marks, smoother blotches, and ease of application. Arigen Pastes are particularly useful for printing alongside Aridye® Pigment Colors, enabling the printer to obtain a wide range of color combinations not otherwise readily or economically obtainable. The principal Arigen Pastes include the following; Others will be available soon:

Arigen Bordeaux MR Paste
Arigen Blue P Paste
Arigen Red GNBS Paste
Arigen Orange R Paste
Arigen Yellow G Paste
Arigen Red G Paste
Arigen Violet B Paste
Arigen Scarlet R Paste
Arigen Red R Paste

ARILAN* DYES
(Interchemical)

Arilan Dyes are Interchemical's metalized acid dyes for wool. The dyes in this series are said to provide brilliant shades of excellent all-around fastness. Arilan Dyes are particularly suitable for dyeing a wide range of shades, from pastels to deep, rich tones on loose wool or slubbing, yarns, felt, woolen and worsted piece goods. The principal dyes in this series are:

Arilan Pink BA Conc,
Arilan Yellow GLN,
Arilan Yellow GR Conc,
Arilan Blue 2G Ex Conc,
Arilan Navy 2R, and
Arilan Orange G.

* Trade Name

ARILITE* DYES
(Interchemical)

Arilite Dyes are fast-to-light direct dyes for dyeing cotton and rayon. These new Interchem Dyes are said to have excellent penetrating and leveling properties. Because they have no affinity for acetate, they are useful for cross-dyeing rayon-acetate blends. Arilite Dyes designated by the letter "U" are particularly valuable for dyeing fabrics which are to be treated with resin finishes. Shades produced with the dyes of the "U" series are said to exhibit minimum shade change when resin finished. Washfastness is improved after resin treatment. It is stated that lightfastness is outstanding before and after resin treatment. The principal Arilite Dyes include the following; others will be available soon:

Arilite Blue LDU
Arilite Blue 10BLU
Arilite Blue RLU
Arilite Blue 2RLU
Arilite Red 5BLU
Arilite Red 6BLU
Arilite Orange 4GLU
Arilite Yellow RSLU

* Trade Name

AULABRITE* BLACK 1604
(Aula)

Brown-black pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. When suitably extended, gives beautiful French gray shades. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to have excellent light fastness properties.

* Trade Mark Registration Applied for.

AULABRITE* BLACK 1605
(Aula)

Bluish black pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Will give almost jet black prints and when suitably extended, yields good medium gray shades. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to have excellent light fastness properties.

* Trade Mark Registration Applied for.

AULABRITE* BLACK 1606
(Aula)

Bluish-black pigment dispersed in an oil-in-water emulsion of a polyester resin. This product is said to represent the highest practicable pigment concentration. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same

* Trade Mark Registration Applied for.

pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to have excellent light fastness properties.

AULABRITE* BLACK 1607
(Aula)

Jet black pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. When suitably extended yields beautiful French gray shades. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to have excellent light fastness properties.

AULABRITE* BLUE 1703
(Aula)

Phthalocyanine blue pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. It is stated that the prints are fast to washing and dry cleaning and are crock resistant even in deep shades. The prints are said to be very lightfast, passing 300 hours accelerated light test.

AULABRITE* BLUE 1722
(Aula)

Reddish-blue pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to have excellent light fastness properties.

AULABRITE* BLUE, NAVY 1731
(Aula)

Blue pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to have satisfactory light fastness properties.

AULABRITE* BRILLIANT BRONZE POWDER 125
(Aula)

A bronze alloy flake pigment said to be of exceptional brilliance for use with Aulabrite Bronze Clears.

AULABRITE* BROWN 1023
(Aula)

Dark brown pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to have good light fastness properties.

AULABRITE* BROWN 1810
(Aula)

Oxide brown pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to have excellent light fastness.

AULABRITE* BROWN 1828
(Aula)

Reddish-brown pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to have good light fastness properties.

AULABRITE* BROWN 1904
(Aula)

Reddish light brown pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to have very good light fastness properties.

AULABRITE* BROWN 1925
(Aula)

Dark brown pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to have good light fastness properties.

AULABRITE* GRAY 1601
(Aula)

Bluish-gray pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to have excellent light fastness properties.

AULABRITE* GRAY 1602
(Aula)

Bluish-gray pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. When suitably extended, gives beautiful steel gray shades. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be

* Trade Mark Registration Applied for.

co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to have excellent light fastness properties.

AULABRITE* GREEN 1702
(Aula)

Phthalocyanine green pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to be fast to washing and dry cleaning and are crock resistant even in deep shades. It is stated that the prints are very lightfast, passing 300 hours accelerated light test.

AULABRITE* GREEN 1713
(Aula)

Green pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to have very good light fastness in deep shades and to be satisfactory in light shades.

AULABRITE* MAROON 1501
(Aula)

Brilliant maroon pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to have very good light fastness properties.

AULABRITE* ORANGE 1404
(Aula)

Brilliant orange pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to have excellent light fastness properties.

AULABRITE* ORANGE 1704
(Aula)

Brilliant orange pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging.

AULABRITE* RED 1706
(Aula)

Bluish-red pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to have satisfactory light fastness in full tones.

AULABRITE* RED 1901
(Aula)

Bluish-red pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to have satisfactory light fastness in full tones.

AULABRITE* RED 1905
(Aula)

Brilliant medium red pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to have satisfactory light fastness in full tone colors.

AULABRITE* RED 1907
(Aula)

Red pigment dispersed in an oil- in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Said to give beautiful pink shades. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to have excellent light fastness properties.

AULABRITE* SCARLET 1902
(Aula)

Scarlet pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to have good light fastness properties.

AULABRITE* VIOLET 1512
(Aula)

Violet pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to be very lightfast.

AULABRITE* WHITE 1711
(Aula)

Titanium dioxide pigment dispersed in

* Trade Mark Registration Applied for.

an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to be extremely lightfast.

AULABRITE* YELLOW 1401
(Aula)

Brilliant yellow pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to have excellent light fastness properties.

AULABRITE* YELLOW 1402
(Aula)

Lemon yellow pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. Mey be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to have excellent light fastness properties.

AULABRITE* YELLOW 1403
(Aula)

Golden yellow pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to have excellent light fastness properties.

AULABRITE* YELLOW 1612
(Aula)

Yellow ochre pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to have very good light fastness.

AULABRITE* YELLOW 1712
(Aula)

Greenish-yellow pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging. The prints are said to have excellent light fastness properties.

AULABRITE* YELLOW 1721
(Aula)

Brilliant yellow pigment dispersed in an oil-in-water emulsion of a polyester resin. Recommended by the manufacturers for machine or screen printing when diluted with Aulabrite Extender. Suitable for printing on cotton, rayon, Fiberglas and synthetic fabrics. May be co-printed in the same pattern with dyes. The prints are set by can drying followed either by curing for three minutes at 300°F or by acid aging or steam aging.

BENZO FAST ORANGE GD CONC CF
(General Dyestuff)

A straight direct dyestuff (C I 653) which is employed for dyeing bright yellowish-orange shades said to be of commercial fastness and very good tinctorial value on cotton, rayon and silk textiles and on wool unions. On nylon this orange may be used when fastness requirements are more severe, it is stated, since it gives very good to excellent wet fastness and light fastness on that fiber. Two advantages of this product are said to be excellent dischargeability and suitability for use on textiles that are to be rubberized. Although animal fibers are dyed somewhat stronger and brighter than cellulose fibers in a boiling bath, excellent unions are obtained on cotton-rayon-wool mixtures when dyeing is conducted in a cooling bath.

BIXAMINE FAST GRAY BL CONC 150%
(Bick)

A direct dye which is said to possess good light fastness and very good resistance to wet processing treatments. This product is satisfactory for dyeing rayon and cotton in all types of machines and is adapted to padding. As a union dye, Bixamine Fast Gray BL stains wool very slightly. Silk and acetate effects are reserved. Excellent whites are said to be obtained when discharged with hydrosulfite.

BIXAMINE FAST ORANGE WS
(Bick)

A direct dye producing nearly the same tones as Bixamine Fast Orange SE, but its superior solubility makes it a more desirable product for machine dyeing. Dyeings obtained with Bixamine Fast Orange WS are said to possess excellent fastness to rubbing, stoving, organic acids and alkalis. Fastness to light, sea water and mineral acids is said to be good. Animal fibers are stained slightly. Acetate effects remain unstained. Urea-formaldehyde aftertreatment increases wash and light fastness somewhat. There is no appreciable change in shade.

BIXOLAN VIOLET 5RN
(Bick)

An acid color which is said to approach the fastness properties of chrome colors. These fastness properties are due to the dyestuff containing chromium in a complex form. Bixolan Violet 5RN is recommended for loose wool, slubbing, knitting and carpet yarn. It is particularly recommended for piece goods containing different grades of wool or carbonized material. In this case more uniform results are produced than can be obtained with either afterchrome or monochrome dyestuffs.

BRILLIANT ALIZARINE FAST BLUE G
(Ciba)

This product belongs to the acetic acid group of wool dyestuffs and produces a pleasing shade of greenish blue. It is said to have good fastness to light, washing, perspiration, carbonizing, chlorine, sulfur stoving, sea water and decatizing. The neutral pick-up is approximately 90%, making it of interest for cotton-wool or viscose-wool unions particularly when dark stock is used.

CALCODUR* RESIN FAST BLUE 2G
(Calco)

This direct dye is a fairly bright blue slightly on the greenish cast which was

* Trade Mark Registration Applied for.

* Registered Trade Mark

developed for use with resin finishes. It is said to retain its good light fastness after resin treatment. The wash fastness is usually improved by resin treatment and is fairly good as a self shade. This dye can be blended with Calcodur Resin Fast Blue 2R or other direct blues on the market to produce a number of pleasing shades of blue intermediate between the individual shades. In viscose-acetate fabrics, it will dye the viscose and leave the acetate white.

CALCODUR* RESIN FAST BLUE 2R
(Calco)

This clear red shade blue is a new fast-to-light direct dye developed especially for use with resin finishes. It is stated that its very good light fastness as a self shade is retained after resin treatment. In most cases, the wash fastness is improved by resin treatment. It is suitable for use along with other direct blues either for resin treatment or a combination of copper and resin treatment. One of the recommended uses is for viscose-acetate fabrics inasmuch as it will dye the viscose and leave the acetate white.

* Registered Trade Mark

CALCODUR* RESIN FAST ORANGE 5G
(Calco)

It is stated that this direct dye actually improves in fastness to light and other properties when aftertreated with resins although the self shade also produces shades which have superior fastness properties. It is a rich golden orange color and will produce attractive shades on cellulosic fibers either by itself or in combination with other Calcodur resin fast dyes or Calcodur dyes. This orange is recommended by the manufacturers for viscose-acetate fabrics in which it is desired to leave the acetate essentially white.

* Registered Trade Mark

CALCOFLUOR* WHITE 4BT
(Calco)

This direct dye is colorless but has a greenish blue fluorescence which is able to whiten and brighten the appearance of white cellulosic materials. As with most fluorescent dyes, its light fastness is only fair. An outstanding property of this particular Calcofluor dye is said to be its excellent resistance to hypochlorite.

* Registered Trade Mark

CALCOFLUOR* WHITE RT
(Calco)

This is a direct dye for cellulosic fabrics which has no color other than its fluorescence which is blue. This blue fluorescence can enhance the whiteness of white materials or brighten the shades of many pastel colors. It is more effective in light containing ultraviolet rays such as sunlight or daylight than it is under incandescent light.

* Registered Trade Mark

CALCOFLUOR* WHITE T
(Calco)

This is a direct dye on cellulosic fibers and has no color except a blue fluorescence. It is recommended by the producers for the production of brilliant white piece goods and in whitening and brightening the white grounds in prints.

* Registered Trade Mark

CALCOFLUOR* YELLOW HEB
(Calco)

This patented acetate dye is a brilliant green shade yellow which dyes acetate, nylon and the new synthetic fibers. In addition to producing bright yellows, it is also used in combinations to give chartreuse, green, orange and scarlet shades of exceptional brilliance. Such shades are fluorescent in daylight and under ultraviolet light. It is stated that this dye has comparatively good wash fastness and its light fastness, while poor, is commensurate with many of the other dyes which are used with it to produce a range of extremely bright shades.

* Registered Trade Mark

CALCOGENE* BLACK 5GCF SOLUTION
(Calco)

This is a solution of a sulfur dye which is also available in powder form. Some dyers prefer a dye in solution rather than a powder because it can be measured directly from dye drums next to the machine. Dye baths of high concentration can be prepared with this liquid sulfur black and it, therefore, is very suitable for application by padding processes. Even in the brief fixation time of continuous processes, the dyed textile material is said to show maximum fastness to crocking and washing.

* Registered Trade Mark

CALCOGENE* BLACK RBCF SOLUTION
(Calco)

This is a solution of a sulfur dye which is also available as a powder. The use of a solution eliminates the necessity of handling and weighing large amounts of powder dye and sodium sulfide and heating to put into solution. Because liquid sulfur blacks contain fewer insoluble impurities than powder types, they are extremely well suited to stock package and beam dyeing machines where the textile material exerts a strong filtering action.

* Registered Trade Mark

CALCOPAD* BLACK H
(Calco)

This is a dispersion of carbon black in a paste form and is especially recommended by the manufacturers for padding operations with resin emulsions. As with other Calcopad colors, the usual application procedure consists of padding a mixture of Calcopad pigments and resin binder on a fabric followed by drying, curing and washing where desirable.

* Registered Trade Mark

CALCOPAD* BLUE B
(Calco)

This dye is a dispersion of a vat pigment in paste form and is recommended by the manufacturers for padding operations in conjunction with resin emulsions. It is claimed that, as is also the case for other Calcopad pigments, this should prove superior to ordinary pigment dispersions in all-around padding operations because the pigment will not migrate on closely woven materials.

* Registered Trade Mark

CALCOPAD* BLUE G
(Calco)

This is a dispersion of a phthalocyanine pigment in a paste form and is recommended by the manufacturers for padding operations in conjunction with resin emulsions. As with other Calcopad colors, it is frequently possible to combine the coloring operation with the resin finishing operation and thereby shorten the over-all processing cycle of the fabric.

* Registered Trade Mark

CALCOPAD* BROWN DK
(Calco)

This dye is a dispersion of a vat pigment in paste form and is recommended by the manufacturers for padding operations in conjunction with resin emulsions. As in the case of the other Calcopad pigments, a definite amount and kind of resin is necessary to bind a given amount of pigment to the fabric and produce the proper fastness. In light shades, the amount of resin required as a binder is small and it is, therefore, possible to achieve a satisfactory finish on the cloth.

* Registered Trade Mark

CALCOPAD* FAST YELLOW
(Calco)

This is a dispersion of a vat pigment

* Registered Trade Mark

in paste form and is recommended by the manufacturers for padding operations in conjunction with resin emulsions. One of the applications of this and the other Calcopad colors is in the coloring of tapes and rug bindings. These are among the many end uses for which the coloring and resin treatment of tapes by the Calcopad system show good possibilities.

CALCOPAD* GRAY M
(Calco)

This dye is a dispersion of carbon black in paste form and is formulated especially for padding operations in conjunction with resin emulsions to give best compatibility, penetration and uniform running properties. It is stated that it should be useful in coloring problems involving a wet alkaline media where good fastness to light, excellent dispersion and ease of handling are primary requirements.

* Registered Trade Mark

CALCOPAD* GREEN G
(Calco)

This dye is a dispersion of phthalocyanine pigment in paste form and is recommended by the manufacturers for padding operations in conjunction with resin emulsions. In many cases, Government regulations permit the use of resin-bonded pigments in the coloring of nylon or Orlon nettings. This and the other Calcopad colors may be used in such applications.

* Registered Trade Mark

CALCOPAD* GREEN M
(Calco)

This dye is a dispersion of an inorganic oxide pigment in paste form and is recommended by the manufacturers for padding operations in conjunction with resin emulsions. The Calcopad pigments have been applied to cotton, viscose, acetate, nylon, Orlon and various blends of these fibers. In addition, they can be applied to specialty fabrics such as jutes, Fiberglas, asbestos or other materials for specialty uses.

* Registered Trade Mark

CALCOPAD* PINK FF
(Calco)

This dye is a dispersion of a vat dye pigment in paste form and is recommended by the manufacturers for padding operations in conjunction with resin emulsions. It is stated that, as in the case of other Calcopad pigments, this may be applied in light shades on cotton piece goods continuously with good fastness, uniformity of shade, and economy. In many cases combining the color with the resin finish will eliminate the necessity of dyeing the fabric prior to resin treatment.

* Registered Trade Mark

CALCOPAD* RED M
(Calco)

This dye is a dispersion of an inorganic oxide in paste form and is recommended by the manufacturers for padding operations in conjunction with resin emulsions. As with other Calcopad colors, one outstanding application is in curtain materials. Practically all fibers, cotton, viscose, nylon, Orlon, Fiberglas and combinations, are potential fields for Calcopad application. Usually fabric stabilization and the proper hand can be obtained in the same operation with the coloring.

* Registered Trade Mark

CALCOPAD* SCARLET Y
(Calco)

This dye is a dispersion of an insoluble azoic pigment in paste form and is recommended by the manufacturers for padding operations in conjunction with resin emulsions. It is stated that, as in the case of the other Calcopad colors, uniform union shades on acetate viscose and other blends can be produced by the continuous process. While this application is usually limited to pastel shades, it has the advantage of giving good fastness to light and washing on all fibers involved.

* Registered Trade Mark

CALCOPAD* VIOLET 6R
(Calco)

This dye is a dispersion of a vat pigment in paste form and is recommended by the manufacturers for padding operations in conjunction with resin emulsions. As in the case of other Calcopad colors, in some special applications, where the finish may not be as important, heavier shades may be permissible. To attain a heavier shade, it is necessary to use a sufficient amount of resin binder in order to have satisfactory fastness to crocking. This may introduce a rather firm hand in the finished material.

* Registered Trade Mark

CALCOPAD* YELLOW GC
(Calco)

This dye is a dispersion of a vat pigment in paste form and is recommended by the manufacturers for padding operations in conjunction with resin emulsions. As in the case of the other Calcopad colors, some specialty felts show indications of being successfully processed with Calcopad pigments. This is particularly true where felts with a firm hand are desirable.

* Registered Trade Mark

CALCOPAD* YELLOW M
(Calco)

This dye is a dispersion of an inorganic oxide in paste form and is recommended by the manufacturers for padding operations in conjunction with resin emulsions. As with the other Calcopad colors, it is particularly useful in coloring specialty fabrics which may contain some part of their fibers which are not dyeable. For instance, it is stated, combinations of dyeable fibers such as viscose or cotton with Fiberglas, may be uniformly colored by the Calcopad system.

* Registered Trade Mark

CALCOTONE* RED 2B PASTE
(Calco)

This dye is a pigment dispersion which finds its greatest application in the paper trade. However, it is a good low-cost all-purpose pigment paste which may well find some application in printing and in limited padding operations.

* Registered Trade Mark

CALCOTONE* RED N5B PASTE
(Calco)

This is a pigment dispersion in paste form of a blue-shade red which will probably find its greatest application in the paper field but may be used on textiles for printing and for limited padding operations.

* Registered Trade Mark

CALCOZOIC* BLUE B SINGLE SOLUTION
(Calco)

As in the case of other Calcozoic dyes, this blue is an azoic dye which has been diazotized and stabilized in such a manner that it will couple with a naphthol only after the stabilizing component has been broken down. This stabilizer is split off by acid conditions such as those produced in an acid ager. The Calcozoics are primarily designed for use in the printing field.

* Registered Trade Mark

CALCOZOIC* RED KB SINGLE SOLUTION
(Calco)

As in the case of other Calcozoic dyes, this stabilized azoic red may be combined with a desired naphthol to form a solution ready for printing. The resulting solution is quite stable and may be prepared and stored in closed containers until ready for use. After printing, the stabilizer of the Calcozoic Red KB is broken down in acid aging at which time combination with the naphthol occurs.

* Registered Trade Mark

CALCOZOIC* RED RC SINGLE SOLUTION
(Calco)

This stabilized azoic red and the other Calcozoic dyes offer the printer a versatility which has heretofore been unavailable to the printer of cotton and rayon textiles. The number of shades available from any one Calcozoic is limited only by the number of naphthols or combinations of naphthols at the disposal of the printer.

* Registered Trade Mark

CAPRACYL* GRAY GN
(Du Pont)

Produces attractive reddish-grays on nylon and wool and can be applied from either neutral or mildly acidic dyebaths. It is especially recommended by the producers for the production of neutral grays where it exhibits good build-up characteristics. The color exhausts almost completely from the dyebath assisted by a small amount of ammonium acetate, which is added toward the end of the dyeing cycle. Capracyl Gray GN is also of interest for application to mixtures of spun nylon and wool where the nylon is to be dyed heavier than the wool. It has very good affinity for both spun and filament nylon and when applied to either form is said to exhibit good light fastness accompanied by a monotone fade. Wet fastness properties of the color are said to be appreciably superior to those of acetate or acid types. Capracyl Gray GN exhausts onto the fiber gradually and at the end of the dyeing cycle only a slight tint remains in the dyebath. Because of its neutral dyeing properties, Capracyl Gray GN is especially recommended by the manufacturers for application to wool. It has better light fastness on this fiber than it does on nylon while the wet fastness is similar and good. Good exhaustion and fastness properties make it a valuable addition to the Capracyl range for the production of fast grays or as a shading component for blues. When tested for effect fiber staining, Capracyl Gray GN shows a trace stain on acetate, appreciably stains cotton and rayon, and dyes silk, wool and nylon. The color is said to be especially suitable for the stock and top dyeing of nylon and wool that will eventually be used in suitings, work clothing, uniforms and automotive fabrics.

* Registered Trade Mark

CAPRACYL* VIOLET R
(Du Pont)

An interesting representative of the group of neutral dyeing colors developed by Du Pont. It is of interest as a shading color for application to either nylon or wool. Brighter shade approximations can be made with other acid dyes although they are inferior in both light and wet fastness properties. Capracyl Violet R is absorbed readily from neutral dyebaths and exhausts almost completely with an addition of 3% to 5% of ammonium acetate. This new color dyes nylon and wool about equal in strength from neutral, ammonium acetate and acetic acid baths. It will be of interest for the union dyeing of the two fibers. It produces level dyeings on nylon from neutral or ammonium acetate baths. The color has good affinity for nylon and exhibits very good absorption. It is said to be of interest because of its good fastness to light and wet processing. Effect fibers attached to nylon show acetate, cotton and rayon to be appreciably stained while silk and wool are dyed. An outstanding advantage of Capracyl Violet R is said to be its neutral dyeing affinity on wool. Since sulfuric acid is not required, the wool fibers are not subjected to possible damage by high acid concentrations necessary for applying Chromacyl* colors. Neutral dyeings of Capracyl Violet R are superior to acid dyed Chromacyl and Du Pont Milling colors in light fastness. Wet fastness of the new product is also superior, in most cases, to that obtained with the acid types. It is said to be an ideal base for browns and violets and to be a good shading element for grays, blacks and other color mixtures. It is recommended by the manufacturers for the stock and top dyeing of nylon and wool that will be subsequently used in suitings, shirtings, sportswear, automotive fabrics and related end uses requiring good light and wet fastness properties.

* Registered Trade Mark

CELLITON BLACK BGA FOR PRINTING
(General Dyestuff)

A new dyestuff manufactured especially for printing black and also grey shades on acetate fabrics. It may likewise be printed as a blue black on nylon by use of the formulation for acetate. This new printing brand is said to be characterized by superiority over the usual printing blacks in resistance to sublimation and in freedom from speck formation when prints are steamed with or without pressure.

CELLITON FAST BLUE AF EXTRA CONC
(General Dyestuff)

A dispersed, direct-dyeing Anthraquinone-type dyestuff manufactured for dyeing fast-to-light blue shades on acetate said to possess good (3) resistance to atmospheric fading, or better resistance than that afforded by the commonly used fast-to-light acetate blues. It is also recommended by the manufacturers for dyeing medium-blue shades on nylon with good fastness properties. It is not offered for printing.

CELLITON FAST BLUE FFRN EXTRA CONC
(General Dyestuff)

A straight, readily dispersible anthraquinone dyestuff, which is said to dye acetate and also nylon directly to give very bright, fast-to-light blues. The bright, strong, somewhat greenish blues obtained with this product on acetate are said to display very-good-to-excellent (6-7) fastness to light in full shades and good-to-very-good (5-6) fastness to light shades. It is claimed that, because it is the most economical acetate blue for use at high temperatures, because it has excellent (5) fastness to sublimation and crocking (dry rubbing) and because it is level dyeing, this blue is advantageously employed in the production of dark browns and dark greens, such as seal brown and bottle green.

CELLITON FAST NAVY BLUE BA-CF
(General Dyestuff)

A straight, readily dispersible direct-dyeing dyestuff (Pr 232) for cellulose acetate and also for nylon, which gives deep navy shades said to be characterized by better than average fastness to light and by little change in shade in artificial light. The deep, rich navy shade obtained with this product at a depth of 6% on cellulose acetate is said to display excellent (7) fastness to light, fair (2) fastness to washing very good (4) fastness to hot pressing, excellent (5) fastness to sublimation and good (3) fastness to atmospheric gas fading.

CELLITON FAST PINK BA-CF
(General Dyestuff)

A straight, dispersed type of anthraquinone dyestuff manufactured for the direct dyeing of bright, fast-to-light, pink shades on acetate textiles; it is also useful for dyeing nylon. The brilliant pink shades obtainable with this product are said to give this dyestuff an indispensable place for dyeing acetate, and also nylon, lingerie of both woven and knitted constructions.

CELLITON FAST RED VIOLET RNA-CF
(General Dyestuff)

A straight, readily dispersible anthraquinone dyestuff (Pr 237) manufactured for the direct dyeing of very bright red-violet shades said to be of excellent light fastness and very good tinctorial value on cellulose acetate. It may also be used for equally bright violet shades of good light fastness on nylon. The deep, rich, red-violet dyeing obtained with this product at a depth of 2% on cellulose acetate is said to display excellent-to-maximum (7-8) fastness to light, excellent (5) fastness to dry hot pressing and sublimation, and good (3) resistance to gas fading.

CELLITON FAST RUBINE BA-CF
(General Dyestuff)

A straight, dispersed type of azo dyestuff (Pr 238) offered for the direct dyeing of bluish-red shades said to be of superior light fastness on acetate; it is also suitable for dyeing nylon. A particular advantage of the present manufacture is its excellent dispersion and its freedom from a tendency to form tar. This product when dyed in full depths on acetate, is said to produce rich ruby shades of very-good-to-excellent (6-7) fastness to light, very-good-to-excellent (4-5) fastness to sublimation and very good (4) fastness to gas fading. These heavy dyeings display excellent (5) dischargeability.

CELLITON FAST RUBINE 3BA-CF
(General Dyestuff)

A straight dispersed type of azo dyestuff (Pr 239) offered for the direct dyeing of Bordeaux shades said to be of superior light fastness on acetate; it is also suitable for dyeing nylon. This dyestuff is a nondusting powder, which disperses well without any tendency to form a tar in either cold or hot water. This product when dyed at medium percentages on acetate, produces rich Bordeaux shades, and, at low percentages, pleasing old-rose tones. The very good tinctorial value of this dyestuff makes it especially useful, either alone or in combination, where great depth of color is desired.

CELLITON FAST VIOLET 6BA-CF FOR PRINTING
(General Dyestuff)

A straight, dispersed anthraquinone-type dyestuff prepared especially for printing acetate and also nylon fabrics. It produces very bright bluish-violet shades on acetate said to be of very good light fastness, which are especially useful for brilliant patterns on dress, necktie and bathing-suit fabrics. The shades of prints on nylon are distinctly bluer than on acetate but equally good tinctorially. Fastness properties of this dyestuff on nylon are about the same as on acetate, except fastness to atmospheric fading, which is excellent (5) on nylon but poor (1) on acetate.

CELLITON FAST YELLOW GRA-CF
(General Dyestuff)

A well-dispersed azo dyestuff manufactured for the direct dyeing of dischargeable yellow shades on acetate textiles. The medium-yellow, bright shades obtained with this product are quite generally useful where self shades are required, the tone being distinctly redder than the shade of Celliton Fast Yellow GA and much greener than the golden yellow of Celliton Fast Yellow RRA. Very good affinity and good leveling properties at medium as well as at high temperatures are said to make Celliton Fast Yellow GRA-CF suitable for application in either jig or real.

CHROME FAST BORDEAUX FBL
(Ciba)

An interesting addition to the Chrome Fast series of reds and bordeaux. It is said to have good penetrating qualities making it particularly suitable for serges and gabardines. This color dyes well either top chrome or metachrome. It should be of interest for raw stock as it covers tippy wool well when dyed by the top chrome method. Fulling, carbonizing, perspiration and very good light fastness are said to make it an excellent men's wear product.

CIBA* RED 2B DOUBLE PASTE
(Ciba)

Is a nondrying brilliant red violet standardized especially for screen and roller printing. It produces pure, clear shades of red violet said to possess high tinctorial value on both cotton and rayon with generally good to excellent fastness properties. It is readily reduced even under adverse aging conditions and can be speedily reoxidized and developed in the open soaper.

* Registered Trade Mark

CIBACETE* BRILLIANT PINK 4BN
(Ciba)

A new acetate dyestuff for producing bright shades said to be of unusually good light fastness on acetate rayon and nylon. This color is especially recommended by the manufacturer for application printing because of its excellent dispersibility and resistance to sublimation.

Cibacete Brilliant Pink 4BN does not reserve viscose rayon but the stain is easily cleared to an excellent white with hydrosulfite without effect on the acetate dyeing.

* Registered Trade Mark

CIBALAN* COLORS
(Ciba)

Cibalan Yellow GRL
Cibalan Yellow 2BRL
Cibalan Orange RL
Cibalan Brown 2GL
Cibalan Brown BL
Cibalan Brown TL
Cibalan Khaki GL
Cibalan Scarlet GL
Cibalan Bordeaux 3BL
Cibalan Blue BL
Cibalan Grey BL
Cibalan Grey 2GL

These twelve colors represent the beginning of a brand new and original series of "metal complex" dyestuffs. By a simple dyeing procedure in a nearly neutral dyebath they produce shades said to be of outstanding light and wet fastness on wool, nylon and silk. It is stated that raw stock can now be dyed in a much shorter time—30-40 minutes boil—and the results produced equal those of chrome colors. It is further stated that the excellent reserve of acetate-viscose-cotton and the excellent light fastness, make these new colors of particular interest in union dyeing of wool and cellulosic fabrics. Cibalan colors are said to be ideal for upholstery fabrics composed of cotton back-nylon face due to their excellent light fastness on nylon.

* Registered Trade Mark

CILLA FAST YELLOW 5R
(Nova)

A new homogeneous acetate dyestuff giving bright golden yellow shades said to possess excellent fastness to gas fading, perspiration and sublimation. Fade-Ometer tests are said to indicate that it possesses unequalled fastness to light. It can be dyed either on the jig at 160°F or in other forms of apparatus up to 190°F. It is well suited to cross dyeing, leaving cotton and viscose white. It is recommended by the manufacturers for dyeing drapery and other fabrics where extreme fastness to light and gas fading are paramount.

CLOTH FAST BORDEAUX B
(Ciba)

A bright bluish red said to be of excellent light fastness on both wool and nylon. A worthy companion to the new Cloth Fast Red 2BL, it provides a neutral dyeing red of bluish tone that is said to equal the fastness properties of the heretofore superior yellow and blue components. It can be used for shading chrome colors or as a chrome color as its wet fastness properties are somewhat improved with chrome.

CLOTH FAST BRILLIANT RED 3BW
(Ciba)

This color produces bright red shades said to possess good all-round fastness but particularly light fastness on wool, silk and nylon. It is stated that dyeings are fast to carbonizing, stable to chrome, and are not affected by prolonged boiling. This product can be used for shading chrome colors and its very good fastness to chlorine make it suitable for use on carpet yarns. Acetate and viscose rayon effects are reserved in neutral dyeing as well as in an acid dyebath.

CLOTH FAST RED 2BL
(Ciba)

Another new addition to the Cloth Fast series it introduces a medium toned red said to possess unusual light fastness on both wool and nylon. It is stated that it is an excellent neutral dyeing color and is recommended for dyeing spun viscose-wool union materials. It is further stated that Cloth Fast Red 2BL has good solubility, levels and penetrates well and can be used for shading Chrome colors. Dyeings of this color are said to have very good fastness to perspiration, salt water and carbonizing.

CLOTH FAST YELLOW GW
(Ciba)

This new addition to the Cloth Fast series has good affinity for wool whether applied in an acid or neutral dyebath. It produces pure yellow shades said to possess good fastness to light and washing on wool, silk and nylon. Acetate and viscose rayon effects are reserved when applied in an acid bath. Mixed fabrics of wool and nylon are dyed uniformly. Cloth Fast Yellow GW is suitable for application printing and for producing dischargeable ground shades.

DIAZAMINE BORDEAUX 7B
(Sandoz)

The manufacturer has recently added this new type to their line of diazotized and developed colors. This brand is reported to be considerably bluer than their 2BLX type when developed with beta naphthol. It is stated that the product has moderate fastness to light but very good fastness to washing. The color has very good build-up properties and produces full shades at moderate dye cost.

DIAZOPHENYL* BRILLIANT GREEN G
DIPHENYL* BRILLIANT GREEN G
(Geigy)

This new dyestuff is sold both as a developed and direct color as it is well adapted for application by either method. It is stated that when developed with Developer Z it produces one of the brightest greens ever produced with a developed dyestuff. The manufacturer states that this color when so used has excellent wash fastness and fair light fastness—subsequent application of urea formaldehyde resin treatment only slightly effects the shade and it has practically no effect on the light resistance. The color reserves acetate and rayon very well and is also well adapted for discharge work. In fact, one of its most promising fields is for use as a ground shade on fabrics which are to be subsequently discharged. When used as a direct dyestuff it is stated that this color produces shades somewhat bluer than the developed shade and with only slightly inferior wash fastness.

* Registered Trade Mark

DIPYRAZO ORANGE RXA
(Pharma)

A new developed orange with the general working properties of Dipyrazo Orange GXA, however, giving a redder, brighter shade. It is stated that the product should serve as an excellent substitute where a redder orange is desired.

DIPYRAZO SCARLET 5BL EXTRA
(Pharma)

A full, bluish scarlet shade when developed with beta-naphthol. It is said to have excellent perspiration and salt water fastness, and very good wash fastness. Both the neutral and alkaline discharges are good.

DIPYRAZO SCARLET RPC
(Pharma)

This product is similar to Dipyrazo Scarlet RP, however, with improved properties when used for cotton and corduroy. The shade is considerably brighter and has better wash fastness. The light fastness has also been improved.

DIRECT BLUE 6B EXTRA CONC
(Pharma)

A very bright, clear shade of blue for cotton and viscose, with general good working properties. Both the neutral and alkaline discharges are white.

DIRECT FAST SCARLET 8B
(Pharma)

A substantive shade for cotton and viscose. Acetate remains white. It may also be printed on viscose and silk.

DIRECT FAST SCARLET 4GCW
(Pharma)

A very bright, full shade of scarlet said to possess generally good properties, specifically excellent nylon and acetate reserve, with very good silk and wool reserve.

DU PONT ANTHRAQUINONE MILLING BLUE BL
(Du Pont)

An outstanding acid blue for use on both wool and nylon. It produces Royal blue shades that are said to have very good resistance to the majority of color-destroying influences encountered during processing and also to show particularly good fastness to light. On nylon, the light fastness is slightly higher than on wool, while the wet fastness properties are comparable and in some cases slightly superior. This product is recommended by the manufacturers for the dyeing of raw-stock and yarns that are eventually to be used for half-hose and knit goods. Du Pont Anthraquinone Milling Blue BL is compatible with other colors for neutral dyed light-fast unions and is valuable as a wool shading element for browns, tans and grays. Because of its generally good application properties it is also an especially good color for silk. Du Pont Anthraquinone Milling Blue BL is readily soluble. In dyeing materials containing effect threads it leaves cotton and rayon unstained and stains acetate a trace.

DU PONT PAPER WHITE B
(Du Pont)

A fluorescent white dye especially designed for improving the whiteness or brilliance of white papers. It is very effective on all bleached furnishes such as sulfite, kraft, alpha and rag.

DUROFAST BLUE AGLL
(Berkshire)

A new greenish blue suitable for resin after-treatments. Is said to be slower and more level dyeing than the older established counter types of this shade.

DUROFAST BLUE LBLL
(Berkshire)

A new development in the Durofast blue series, which has the outstanding feature of full bloomy shades which reserve acetate and nylon. It is said to be considerably more level dyeing than the older types. Excellent for resin and copper complex after-treatments.

DUROFAST GREY LLUF
(Berkshire)

Eminently suitable for resin after-treatments. This color is suitable for discharge work.

DUROFAST NAVY GBLL
and
DUROFAST NAVY BRLL
(Berkshire)

Two new direct dyeing navies which reserve acetate. Good fastness to light, washing and perspiration are claimed. Excellent for resin-copper complex after-treatments.

DUROFAST NEUTRAL GREY GL
(Berkshire)

Reported to be unique among the fast-to-light greys. Suitable for resin, in that

it is a true pearl grey—said to be outstanding in light fastness before or after resin. Acetate-nylon effects left white.

DUROFAST ORANGE 2GLL
(Berkshire)

This product is redder in cast than the Durofast Orange 4GLL. It is claimed that it is extremely fast to light, washing and is very much improved by resin after-treatments. It is dischargeable. Acetate effects remain white, nylon is reserved in medium depths.

DUROFAST ORANGE 4GLL
(Berkshire)

A level dyeing greenish direct orange dye said to be of outstanding fastness to light, which is further improved by urea-formaldehyde after-treatments. Acetate effects remain white.

EASTMAN DIAZO NAVY BLUE RB
(Tennessee Eastman)

Eastman Diazo Navy Blue RB is a dispersed acetate dye which, when diazotized and developed with BON, is said to give execellent shades of navy blue which are reported to be fast to light, washing, perspiration and sublimation. Even when using increased amounts to dye shades of black on blends of acetate and viscose, Eastman Diazo Navy Blue RB is said to reserve the viscose and eliminate clearing that is normally required.

EASTMAN FAST YELLOW 2R-GLF
(Tennessee Eastman)

This acetate dye is a bright golden yellow reportedly having exceptional fastness to atmospheric gas fading, light, washing, sublimation and perspiration. It is said that the slower exhaust rate of this dye makes it a valuable component with other dyes of the GLF series when an on-tone build-up is desirable. Eastman Fast Yellow 2R-GLF may be used in dyeing draperies and other fabrics where extreme fastness to light is required, and it is reported to have very good (5) fastness to light on pastel shades. It is not dischargeable.

EASTMAN PRINTING BLUE 2B
(Tennessee Eastman)

This is an anthraquinone type dye especially recommended for application printing of acetate fabrics because of the reported excellent dispersibility, excellent resistance to sublimation and very good fastness to wet processing. It is said to produce a clear, bright blue which fixes easily on steaming. The light fastness is reportedly very good in medium and heavy shades of blue on acetate.

EASTONE BRILLIANT FAST RED 2B-GLF
(Tennessee Eastman)

A highly dispersed acetate dye which is offered for both dyeing and printing. It is said to possess exceptional fastness to atmospheric gas fading, light, sublimation, crocking, perspiration, washing and crease-resistant resins. Eastone Brilliant Fast Red 2B-GLF is reported to be the only bright acetate red producing bright neutral pink shades with gas, light, sublimation and wash fastness. This dye is reported to be useful as a self shade for producing pinks or bright reds or as a shading component in combination with other GLF dyes where all-around fastness is required. Eastone Brilliant Fast Red 2B-GLF is said to have good exhaustion and level dyeing properties in a temperature range of 150°F to 190°F. It is dischargeable and may be used for printing.

FAST BLUE BB SALT
(American Aniline)

The diazotized and stabilized salt of the corresponding Fast Color Base. It is readily soluble in necessarily cold water and is prepared with simplicity and facility for naphthol coupling. Stability in solution or print paste is good.

FASTUSOL BLUE LFGL
(General Dyestuff)

A new straight direct dyestuff developed for dyeing fast-to-light blue and combination shades on cotton and rayon. An outstanding feature of this blue is said to be its suitability for use on rayon piece goods that are to be given an anticrease resin finish as the shade and light fastness of dyeing on rayon are scarcely affected by resin finishing. Other important features are dischargeability and suitability for improvement of wet fastness with Solidogen WF Pdr and copper salt.

FASTUSOL BROWN 5GA
(General Dyestuff)

A new, straight, direct dyestuff recommended by the manufacturers for yellowish-brown shades on cotton and rayon with good-to-excellent light fastness. It is especially suitable for rayon dress goods that are to receive an anti-crease finish or to be discharge-printed or to be after-treated with Solidogen WF Pdr. and copper salt for improvement of light and wash fastness. This new brown is also suitable for use on silk.

FASTUSOL ORANGE RRL-CF
(General Dyestuff)

A new, straight, direct dyestuff developed for dyeing fast-to-light oranges of good tinctorial value on cotton and rayon. It is reported to be especially important for dyeing rayon piece goods that receive an anticrease resin finish because it is almost unique among oranges—particularly reddish oranges—in that its fastness to light is scarcely impaired by such after-treatment.

INDANTHRENE BLUE CLN PASTE
INDANTHRENE BLUE CLNWP POWDER
(General Dyestuff)

Dispersed paste and dispersed powder brands, respectively, of a new, straight, anthraquinone vat dyestuff, which has only recently been developed for dyeing fast blues on cotton and rayon by either pigment or prereduced methods. Dyeings of this blue are reported to be characterized especially by excellent resistance to chlorine bleaching (0.3%-active solution) and to washing along with good to excellent fastness to light. It is not offered for textile printing.

INTERCHEM® ACETATE DYES
(Interchemical)

Two new highly dispersed acetate dyes for acetate, nylon, and other synthetics are Interchem Acetate Yellow 5GG and Interchem Acetate Violet 6B. Shades produced with Interchem Acetate Yellow 5GG are said to be characterized by their brilliancy of shade and good fastness to light—even in pastel shades. This dye is useful as a self-shade and also as the yellow component in compound shades where brightness is required. It is especially useful for producing bright greens, tans, and grays. Interchem Acetate Yellow 5GG was developed specifically for application and discharge printing. However, it has proved equally suitable for dyeing. It is stated that, because of its excellent pile-on and leveling properties at low temperatures, it is particularly useful for application on jigs. Interchem Acetate Violet 6B produces a bright bluish violet shade. This dye is useful as a self-shade and as a shading color in compound shades. Interchem Acetate Violet 6B is not recommended for printing.

IRGALAN* YELLOW GL
IRGALAN* OLIVE GL
IRGALAN* BROWN 2RL
IRGALAN* BROWN 2GL
IRGALAN* BROWN 3BL
IRGALAN* GREY BL
IRGALAN* ORANGE RL
(Patented)
(Geigy)

It is claimed that this series of dyestuffs opens the door for the first radical change in the coloring of wool in some quarter of a century. The established basic methods of coloring wool up until the advent of the Irgalans involved the use of long

dyeing procedures, excessive boilings and the use of strong acids. These factors all had a tendency to harshen and have other adverse effects upon the fiber, yarn or fabric being colored. It is stated that, in the Irgalans, the manufacturer offers an entirely new approach to the dyeing of wool, in that, they can be applied in shorter periods of time from a neutral bath with a minimum of boiling and in many instances with no boiling at all, and still produce extremely level results, and with thorough penetration on the tightest of fabrics. For all around fastness it is claimed that the Irgalans will approach or exceed the fastest of wool colors used heretofore. The various colors in the range are said to have an average rating to sunlight of 6-7, domestic washing 5, mill washing 4-5, fulling for 1½ hours of 4, perspiration 5, dry and wet cleaning 5 and crocking 4-5. Fastness to other conditions is similarly high. It should also be noted that the manufacturer states that the individual colors of the Irgalan range not only are almost identical to each other with respect to fastness, but also have almost identical working properties—that is, they draw and exhaust in combination like a homogeneous dyestuff. It is also stated that with the Irgalans tippy wool and blends of various grades of wool can be dyed evenly to a solid shade. The manufacturer also recommends the Irgalan series for the coloring of filament and spun nylon in all forms, application printing on cotton fabrics, coloring of cellulose acetate by the solvent method, and coloring of silk. In all fields of application it is stated the Irgalans produce the same high quality all around fastness as on wool. At the present time the range consists of those colors given in the heading, and in the not too distant future it is expected that this range will be further expanded.

* Registered Trade Mark

IRGANOL* RED BLS
(Pat applied for)
(Geigy)

This is the first of a new range of colors which will be offered by this manufacturer—these dyestuffs on the whole will be somewhat faster to light and fulling than the well known "Polar" series which has been widely known and used for many years. The Irganols will also as a group draw much better from a neutral bath than the Polars. Irganol Red BLS produces a blue shade of red and is said to have exceptionally good light fastness and good resistance to fulling, and the ability to withstand a chrome bath in the same manner as the Polar colors. It is also said that Irganol Red BLS is also outstanding for its ability to cover tippy wool uniformly. It is the feeling of the manufacturer that this new range should prove very useful for the dyeing of slubbing, raw stock and union goods where the end requirements call for extremely good light and wet fastness. Irganol Red BLS is also said to be well adapted for the dyeing of spun or filament nylon, either raw stock or piece goods, with the same good fastness that is obtained on wool.

* Registered Trade Mark

LANASYN BLUE GL PAT
(Sandoz)

A bright greenish blue, reported to have excellent fastness properties on wool, nylon, and pure silk. It is being highly recommended by the manufacturers for the dyeing of worsted top and raw stock in combination with Lanasyn Green BL Pat for the production of all types of blue, grey and green shades where maximum fastness is required. Like other colors in the series, it can be combined with chrome colors.

LANASYN BROWN RL PAT
(Sandoz)

One of the latest members of a new series of dyestuffs developed by Sandoz for wool, nylon and silk which, when dyed neutral or with small amounts of ammonium sulfate, and boiled for 30 or 40 minutes, are said to possess fastness properties most of which are equal to chrome dyes. The Lanasyn Colors may also be combined with chrome dyes for metachrome, topchrome or chrome mordant work. It is stated that an important advantage of the Lanasyn Colors is that it is possible to obtain far better duplication of shade from batch to batch than with certain chrome colors which are so often affected by (1) Ever-changing amounts of iron in the water and steam; (2) Variation in the degree of chroming. Generally speaking, the Lanasyn Colors are claimed to have all the excellent fastness properties required for men's wear, i.e., excellent fastness to light, fulling, carbonizing and decatizing. Other colors in the line include, Lanasyn Blue GL Pat, Lanasyn Green BL Pat and Lanasyn Grey BL, with an Orange, Yellow, Violet and Red to be announced in the near future.

LANASYN GREEN BL PAT
(Sandoz)

The latest addition ot the new Lanasyn series. The new product is reported by the manufacturer to be compatible with other colors in the series and to have similar excellent fastness to light, fulling, carbonizing, washing, perspiration and decatizing. The addition of this bright bluish green materially extends the line of mode shades that can be made with this new series of dyestuffs. One of the outstanding features of Lanasyn Green BL Pat reported by the manufacturers is the excellent fastness to fulling, being greatly superior to their standard Cyanine Green type, Alizarine Light Green GS.

LANASYN GREY BL
(Sandoz)

Originally brought out by Sandoz under the name of Sulfonine Grey BWL and described in detail in this issue under its former name.

LEUCOSOL* RED RL PASTE
(Du Pont)

An anthraquinone vat color said to possess outstanding light fastness plus a monotone fade at all strength concentrations when printed on cotton. These same properties are obtainable on rayon in the lighter shades. Leucosol Red RL Paste exhibits bluish-red and bluish-pink shades with good brightness and builds up well in the production of deep wines and marcons on cotton fabrics. It is particularly of interest as a shading color for tan, gray and beige shades and as a pink base for use with a brown in making shades of dusty rose. It performs well when incorporated with other light-fast vat colors such as Ponsol Golden Orange RRT Paste, Ponsol Brilliant Orange RK Paste, Ponsol Red Brown RB Paste and Ponsol Yellow AR Double Paste for printing drapery fabrics, chambrays and ginghams as well as light shades on rayon that require very good fastness to light and good resistance to washing. It has been processed to yield the finest printing properties. It does not settle out on storage and has good stability in the reduced leuco form. It exhibits very little sensitivity to changes in the amounts of chemicals used in the printing paste. It is stated that it can be considered a speck-free printing color and the prints display very little variation to different aging time periods. The color retains its excellent light fastness when subjected to resin treatments. This product is not recommended for colored discharge work.

* Registered Trade Mark

MAYVAT* DIRECT BLACK 3G DOUBLE PASTE
(May)

A new fast-to-light direct black vat dyestuff especially suited for all types of dyeing.

* Registered Trade Mark

MIRRORGOLD BRONZE POWDER
(Atlantic Powdered Metals)

New metallic powders, especially designed for printing on textiles, which are

said to give highly brilliant and tarnish-resistant gold and silver printing on many fabrics. The firm making these powders states that it has had years of experience in the textile industry in Europe where gold and silver printing on fabrics has long been practiced with exceptional results.

NATIONAL ALIZARINE BRILLIANT SAPPHIRE R
(National)

National Alizarine Brilliant Sapphire R is an easily soluble, acid dye of the anthraquinone group that levels well in a sulfuric acid dyebath; it also possesses good neutral dyeing properties and good resistance to metal. It possesses excellent fastness to stoving, hot pressing, water, sea water, steaming and rubbing, good fastness to carbonizing and alkali and fair fastness to light. It is also available in a 150% concentration.

NATIONAL ALIZARINE VIOLET NRR
(National)

This is an anthraquinone acid dye of very good solubility yielding bright shades of violet. Although primarily a wool dye it also is suitable for coloring silk, tin-weighted silk, nylon and Acrilan from an acid bath while, by a special dyeing method (cuprous ion) it also is suitable for coloring Orlon and Dynel. When dyed on wool National Alizarine Violet NRR possesses very good fastness to light and excellent fastness to rubbing, carbonizing, stoving and water. It possesses marked resistance to metals and can be used for shading chrome colors.

NATIONAL CARBANTHRENE BRILLIANT VIOLET 4R PASTE
(National)

This product produces, on cotton or rayon, bright violet shades of very good fastness to washing, boiling soap, cross dyeing, stoving, peroxide, chlorine, alkalies, rubbing, water, sea water and light and excellent fastness to perspiration. It can be applied in various types of machines either by the reduced bath method or by pigment pad-jig method for piece goods or by the pigment impregnation reduced bath method for yarns.

NATIONAL CARBENTHRENE GOLDEN ORANGE 3G PASTE
(National)

This is a vat dye of the anthraquinone series yielding, on cotton or rayon, bright, yellowish orange shades of very good fastness to mercerizing and boiling soda and excellent fastness to washing, boiling soap, perspiration, water, sea water, acids, chlorine, peroxide, cross dyeing and light. It can be applied from the reduced bath in both open tubs or machines or it can be applied by the various methods starting with pigment padding.

NATIONAL CARBANTHRENE GOLDEN YELLOW GK DOUBLE PASTE
(National)

A vat dye of the anthraquinone series that is applicable in various types of machines by the reduced bath method as well as by pigment padding methods. It also is suitable for printing. It yields fairly clear, golden yellow shades of good fastness to washing and hot pressing and excellent fastness to perspiration, water, sea water, stoving, peroxide, chlorine, acids, mercerizing and rubbing.

NATIONAL CARBANTHRENE NAVY BLUE BP PASTE
(National)

A nondrying, vat paste of the anthraquinone series yielding, on cotton, rayon or silk, navy shades of excellent fastness to washing, perspiration, sea water, boiling soap, peroxide bleach and light. It is well suited for application by the reduced bath method as well as by the pigment pad-jig method. It is eminently suited for printing.

NATIONAL CARBANTHRENE RED BROWN 5R PASTE
(National)

A vat dye of the anthraquinone group yielding, on cotton or rayon, rich, reddish-brown shades of unusually good fastness to the common color destroying agencies. It reduces readily in a moderately alkaline vat giving a reddish-brown leuco. It can be used in numerous types of apparatus for coloring in the reduced bath or it can be applied by the various pigment-padding methods. It possesses excellent fastness to washing, perspiration, water spotting, sea water, boiling soap, stoving, chlorine, peroxide bleach and cross dyeing and very good fastness to rubbing, mercerizing, boiling soda and light.

NATIONAL CARBANTHRENE RED G2B DOUBLE PASTE
(National)

An anthraquinone vat dye of high tinctorial power yielding pleasing, covered, bluish-red tones of very good fastness to perspiration, fulling, peroxide bleach, chlorine, stoving, alkali and hot pressing. Suitable for pigment pad-jig and machine dyeing.

NATIONAL CARBANTHRENE RED VIOLET 2RNX PASTE
(National)

This is a vat dye of the anthraquinone group that not only possesses excellent solubility in the alkaline leuco state but also possesses excellent dispersibility in the unreduced state. It is eminently suited for coloring of cotton or rayon yarn either by reduced method, or by those methods starting with padding. It also is very well suited for application to piece goods by the pad-jig method. National Carbanthrene Red Violet 2RNX Paste possesses good fastness to washing and light and very good fastness to water, sea water, perspiration, acid spotting, chlorine, mercerizing and hot pressing.

NATIONAL CARBANTHRENE YELLOW AR DOUBLE PASTE
(National)

National Carbanthrene Yellow AR Double Paste is an anthraquinone vat dye for cotton or rayon. It can be applied on yarn by the pigment method in circulating machines or in any of the commonly used dyeing equipment for raw stock, yarn or piece goods. It can also be applied by printing. This dye is characterized by excellent fastness to washing, perspiration, chlorine, stoving, peroxide, mercerizing and cross dyeing.

NATIONAL CARBANTHRENE YELLOW GF PASTE
(National)

A vat dye of the anthroquinone series producing bright yellow tones of very good fastness to washing, perspiration and chlorine and excellent fastness to mercerizing. Its excellent dispersibility and solubility render it well adapted for application in all types of machines.

NATIONAL ERIE DIRECT FUCHSIA RED
(National)

A nondusting, direct red yielding, on cotton or rayon, bluish red shades of excellent fastness to cold water spotting and rubbing and good fastness to acid perspiration, ammonia, mercerizing and hot pressing and very good fastness to water and sea water. It can be aftertreated with urea-formaldehyde becoming, on cotton, appreciably yellower in shade but somewhat superior in fastness to light.

NATIONAL NACCOGENE YELLOW GS SINGLE SOLUTION
(National)

A stabilized, azoic dye for printing, producing, on cotton or rayon, pure, greenish shades of yellow. It is perfectly compatible with starch-tragacanth paste

and is fast to stoving. Printed on cotton it exhibits very good fastness to rubbing, hot pressing, boiling soap or soda, washing, peroxide bleach, perspiration and sea water and good fastness to light.

NATIONAL NAPHTHOL AS-G DISPERSIBLE
(National)

Couplings produced on this naphthol are all either yellow or orange shades of varying degrees of brightness. Most of the greenish yellow (lemon yellow) shades possess very good fastness to light, the combination with Scarlet 2G being one of the best in this respect. Prints of this combination also exhibit excellent fastness to washing, boiling soap and soda, perspiration, peroxide, alkali and cross dyeing.

NATIONAL NEUTRAL BLACK BSS
(National)

National Neutral Black BSS is a nondusting, direct black having good affinity for cotton, rayon or silk. On mixed fabrics it colors the animal fiber stronger than the vegetable component. Its cotton dyeings exhibit very good fastness to perspiration, organic acid, ammonia, sea water and dry cleaning. Also available in a 200% concentration.

NATIONAL NIAGARA FAST COPPER BORDEAUX BGL
(National)

This is a new, nondusting, direct dye. It possesses good solubility, levels fairly well and exhausts well. It possesses good affinity for silk, tin-weighted silk and rayon but stains acetate. This dye is seldom used as a simple direct dye but is usually aftertreated, either with copper sulfate or with National Naccufix, the latter aftertreatment giving a slightly bluer and duller shade but one that is somewhat faster to washing than the copper aftertreatment. This dye is also available in a 200% concentration.

NATIONAL RED TR BASE
(National)

A useful product producing varied shades depending upon the naphthol with which it is combined—yellowish red shades with National Naphthol AS-E and National Naphthol AS-SW; bright red with National Naphthol AS-TR, bluish red with National Naphthol AS-BO; Garnet with National Naphthol AS-BR and bright, lemon yellow with National Naphthol AS-G. Full details are given in shade card No. 258—National Naphthols Dyed On Bleached Mercerized Cotton Yarn.

NATIONAL SOLANTINE TURQUOISE G
(National)

This product is not only one of the greenest and brightest direct dyes, but is also one of the best in lightfastness. It can be used as a self shade for the production of brilliant, fast-to-light, direct blue shades or, in combination with National Solantine Yellow FF Conc, for various shades of green of very good fastness to light. National Solantine Turquoise G is non-dusting.

NATIONAL SULFUR GREEN GCF
(National)

This product is a nondusting, bluish green possessing very good solubility and excellent cold dyeing properties. It is well suited for dyeing cotton or rayon piece goods or for coloring yarn, on packages, in circulating machines. It possesses good fastness to washing, perspiration, acid, sea water, stoving and cold water bleeding. It is suitable for coloring material that subsequently is to be rubberized, and it is available, also, in a 150% concentration.

NATIONAL VAT PRINTING VIOLET 6R PASTE
(National)

This is a nondrying product of good fastness to mercerizing, rubbing and light and very good fastness to washing, boiling soap or soda, acid or alkaline perspiration, cross dyeing, acid or alkali spotting, water, sea water, stoving, peroxide bleach, chlorine and hot pressing.

NEOSOL PRINTING BLACK BD
(Ciba)

This new and original printing color produces a comparatively low cost black said to possess excellent fastness on cellulosic fiber materials distinguished by a bloomy deep shade and sharply defined details. Because of its resistance to hydrosulfite, Neosol Printing Black BD is especially recommended for producing fine outlines, free from halos, alongside vat color and white discharges. Also, when used as a black on white or colored overfalls, printers should find this color to be a useful product.

OFNA-CET ORANGE R
OFNA-CET YELLOW BROWN LG
OFNA-CET BROWN LR
OFNA-CET BROWN RCL
OFNA-CET RED BROWN BCL
OFNA-CET SCARLET R
OFNA-CET RED BL
OFNA-CET RED BBC
OFNA-CET RED RL
OFNA-CET BORDEAUX BR
OFNA-CET PURPLE LBC
OFNA-CET BLUE AB
OFNA-CET BLUE R
OFNA-CET BLUE RRC
OFNA-CET SOLVENT
(Nova)

Ofna-Cet* dyestuffs are mixtures of aromatic bases and coupling components standardized on a Naphthol AS base. The Ofna-Cet colors dye acetate from an ammoniacal bath and, after diazotizing on the fiber, the coupling takes place in a hot water bath to form an insoluble azo dyestuff. This simple dyeing process which consists of dyeing from a water bath as described above, does not require any special developer, just a simple hot water aftertreatment of the coupling, and permits the application of the Ofna-Cet range on acetate yarn and piece goods on all sorts of apparatus and in the usual ratio of goods to liquor. Ofna-Cet dyes are said to possess very good all around fastness, particularly to washing and cross dyeing, leaving effect threads of wool and viscose rayon white. The Ofna-Cet dyestuffs are also suitable for dyeing nylon, giving dyeings said to be of very good all around fastness and not characterized by the usual barré effects normally found with water soluble nylon colors.

* International Trade Mark applied for

ORCOCHROME FAST BROWN BLL
(Organic)

A chrome dyestuff for wool which can be applied with both the meta and top chrome methods. After an exposure of 140 Standard Fade-Ometer hours, this color is said to have the outstanding property of fading on the blue or dark side and off the red. This property, together with its other reported excellent fastness properties—all of which range from 4 to 5—is said to provide a dyestuff which a discerning dyer can use with confidence.

ORCOGEN BLUE GB, BN, R, D, D NEW, PH, GN
ORCOGEN VIOLET B
ORCOGEN YELLOW GS, GG
ORCOGEN GOLDEN YELLOW R
ORCOGEN RED GS, R, FFBB
ORCOGEN SCARLET RS
ORCOGEN BROWN IB, IPT
(Organic)

Orcogens are stabilized azoic dyestuffs for the printing of cotton, linen and rayon, developed by acid steam aging. They can be used alongside of other usual printable dyestuffs. The use of Orcogens is highly recommended by the producers where both bright shades and very good fastness properties are desirable. These products are available in powder form as well as two concentrations of solutions.

ORCOSOL BRILLIANT ORANGE RK PASTE
(Organic)

An exceptionally brilliant vat orange, said to have a light fastness rating of 7-8, and a very good to excellent fastness rating for washing, mercerizing, and chlorine. The color is suitable for use where a combination boil-off and bleach is required. It is primarily a cold dyeing color, reducing to a red violet.

ORCOSOL FLAVONE YELLOW GC DOUBLE PASTE
(Organic)

A vat dyestuff of exceptional brightness of shade, which reduces easily at 120°F giving a blue vat. It is said to be of very good fastness to washing and mercerizing and can be used with combination boil-offs and bleach. The fastness to light of this color compares favorably with other yellows of greenish casts.

ORCOSOL GOLDEN YELLOW GK DOUBLE PASTE
(Organic)

An anthraquinone vat dyestuff possessing a bright golden yellow shade. It is suitable for colored discharge work on rayon and is said to have good fastness to light, chlorine and washing. The color reduces at 120°F, producing a red vat. It is recommended by the manufacturers for use on all fabrics which require good resistance to wet processing.

ORCOSOL KHAKI 2G DOUBLE PASTE
(Organic)

A vat dyestuff intended for use where maximum fastness to light is required. The color reduces at 120°F to a red vat, is suitable for either regular combination of soda or peroxide boil with chlorine bleach. It is said to hold a fastness rating of very good for washing and mercerizing. Recommended highly by the manufacturers for meeting specifications of government shades.

ORCOSOL OLIVE GREEN B PASTE
(Organic)

A bright olive vat shade, recommended by the manufacturers for the dyeing of cotton and rayon yarn and piece goods. Its reported excellent fastness to light, very good fastness to washing, and its suitability for boil-offs and bleach, make it a dyestuff of general versatility. It is stated that this dyestuff can be used with confidence on government contracts.

PARANOL FAST GREY VL
(Nyanza)

Paranol Fast Grey VL is a direct grey said to be of very good fastness to light and washing. It is a good level dyeing color suitable for using in combination with other Paranol Fast Colors. Paranol Fast Grey VL has good solubility and is suitable for all types of machine dyeing.

PHARMASOL BLACK BRN DOUBLE
(Pharma)

A stabilized azoic black prepared in solution form for simplicity of application. It is said to have excellent properties when printed on cotton and viscose.

PHARMASOL BORDEAUX AF
(Pharma)

A stabilized azoic bordeaux prepared in solution form for simplicity of application. The shade is bright and clean. The product may be used for plissé effects. It is intended for printing cotton and viscose.

PHARMASOL BORDEAUX GP
(Pharma)

A stabilized azoic bordeaux in solution form for simplicity of application. The product gives a clear reddish wine said to possess excellent properties, when printed on cotton and viscose.

PHARMATEX RED GB
(Pharma)

A bright, yellowish red for application to wool, silk and nylon with good general properties.

PHARMOL BORDEAUX AF
(Pharma)

This is a stabilized azoic in powder form. It produces a clear, bright shade when printed on cotton and viscose. It has all the excellent properties of the group. It is also fast to plissé.

PHARMOL GREY R
(Pharma)

This is a stabilized azoic in powder form for printing cotton and viscose. A clear true shade of grey is produced which is said to possess excellent properties.

PONSOL* BRILLIANT VIOLET 3R PASTE
(Du Pont)

Produces bright, red-violet shades that are said to possess a high degree of light fastness. This anthraquinone vat color is suitable for application to cotton and rayon in the form of rawstock, yarn or piece goods. It is of particular interest for the production of deep reddish-violets and is a valuable shading element for many vat color combinations. It is said to possess very good fastness to light and perspiration, and good fastness to hot moist pressing, peroxide bleaching and dry cleaning. It is recommended by the manufacturers for drapery and upholstery fabrics, dress goods, sportswear and similar uses where light-fast shades are desired. Resin treatments applied to cotton that has been dyed with this color cause the shade to become appreciably bluer but effect only a slight reduction in light fastness. It can be applied in circulating type machines as well as by the pad and jig methods. It is stated that this color exhibits good penetration, is level dyeing and is practically resistant to the effects of metals.

* Registered Trade Mark

PONSOL* BROWN BN PASTE
(Du Pont)

An anthraquinone vat color that is said to possess good fastness to light, have good resistance to the effects of such treatments as washing, chlorine, dry cleaning, peroxide bleaching, and show a negligible effect to water spotting after drying. This product is recommended by the manufacturers for dyeing hosiery, work clothing, uniforms, dress goods, drapery and upholstery materials. Not only does it produce heavy, dark brown shades economically but it is particularly suitable as a shading element in the production of other browns. It has good stability in the reduced form at 120°F for two hours, with the shade changing yellower and duller. At 140°F it has good stability reduced for 45 minutes. It is stated that Ponsol Brown BN Paste penetrates well, is level dyeing, and the shade is not affected from contact with copper and iron dyeing equipment. The color is suitable for reduced and pigment dyeing, and performs well in the Du Pont Pad-Steam Continuous Dyeing Process.

* Registered Trade Mark

PONSOL* RED BROWN 5R PASTE
(Du Pont)

Produces bright red-brown shades similar to standard rose shades and is said to possess very good light fastness on cotton and rayon. It is stated that this anthraquinone vat color possesses good fastness to chlorine, peroxide bleaching, washing, crocking, hot moist pressing, and water spotting. It is further stated that good over-all fastness recommends its use for dyeing drapery and upholstery fabrics, dress goods, shirtings, towelings, and related items that require frequent laundering. Ponsol Red Brown 5R Paste will also find extensive use as a shading element in the production of light-fast dusty rose and wine shades. The reduced

* Registered Trade Mark

vat of Ponsol Red Brown 5R Paste is orange-brown in color, and in this form exhibits very good stability at 120°F for two hours. At 140°F the vat is stable for 45 minutes. The color is satisfactory for both pigment and reduced dyeing, and is easily applied by the Du Pont Pad-Steam Continuous Dyeing Process and other continuous dyeing methods. Dyeings made with Ponsol Red Brown 5R Paste are evenly penetrated and level. At dyeing temperatures of 120° to 140°F this color is insensitive to changes in the concentration of caustic soda.

PONTAMINE* FAST BLUE 3RL
(Du Pont)

Said to possess outstanding fastness to light and resin treatments. On both rayon and cotton this direct color yields reddish-blue shades that show good brightness at all strengths. Pontamine Fast Blue 3RL is especially recommended by the manufacturers for dyeing spun rayon to be used for suitings, dress goods and sportswear, upholstery and drapery fabrics and other materials where light fastness is the most important requisite. It is also of interest for producing navies on rayon that are to be subsequently resin treated. The fastness to light displayed by Pontamine Fast Blue 3RL remains quite good after resin applications and resin aftertreatments improve the wet fastness. It is said to have fairly good fastness on rayon to mild washing and perspiration and has moderate fastness to dry cleaning. It has good to fairly good discharge properties on cotton but shows an appreciable staining when discharged on rayon. It is stated that it is readily soluble, penetrates and levels well and can be applied to all forms of cotton and rayon in customary types of dyeing equipment. When used in unions, Pontamine Fast Blue 3RL stains wool very much, although not to a sufficient depth to produce solid shades. Rayon is dyed appreciably heavier and brighter than cotton but the shade is approximately the same. It leaves acetate white, stains nylon noticeably and silk very much.

* Registered Trade Mark

PONTAMINE* FAST ORANGE EGLL
(Du Pont)

Produces reddish-orange shades, and is said to have excellent solubility both hot and after cooling, and to dye levelly on rayon and cotton. On rayon, this color is said to show good fastness to perspiration, dry cleaning, hot moist pressing, dry crocking and fairly good resistance to mild washing. It is recommended by the manufacturers for use on drapery and upholstery materials, dress goods, sportswear and other end uses where fastness to light is the most important requirement. Pontamine Fast Orange EGLL can be combined with a brown and a blue for producing khaki shades and it is an ideal light-fast component in tan, brown and gray combinations. It also has sufficient wash fastness for light shades on hosiery. It is of interest for dyeing unions. In combinations of cotton and wool it dyes the wool yellower and weaker than the cotton. The wool can then be dyed with a neutral dyeing acid color to produce solid shades. In rayon and cotton unions, the rayon is dyed stronger and redder than the cotton. Since this color does not stain acetate it is recommended by the producers for dyeing materials in which a clean acetate white effect thread is desired. It exhausts slowly and penetrates thoroughly. It is suitable for pad or jig work and can be applied in other types of machines by the usual direct dyeing processes. Urea-formaldehyde and melamine resins change the shade only noticeably but lower the light fastness considerably.

* Registered Trade Mark

PONTAMINE* WHITE 2GT
(Du Pont)

A water soluble fluorescent whitening agent especially recommended by the manufacturers for application to cotton and rayon in the form of yarns, knit goods and woven fabrics. It exhibits a strong, greenish-blue fluorescence and is said to have very good fastness to chlorine, washing, discharge, and fairly good resistance to peroxide bleaching. This white dye can be applied at any temperature, although its greatest tinctorial effectiveness is in the temperature range of 130°F to 160°F.

* Registered Trade Mark

PYRAZOL FAST BROWN RLN
(Sandoz)

The latest addition to the Sandoz line of extremely fast to light colors for cotton or rayon. Reported to be especially suitable for jig dyeing, as well as for box work. Claimed to be unsurpassed for leaving acetate white even after prolonged boiling. Other features are said to be its minimum amount of staining of nylon, excellent union of cotton and viscose and very good fastness to washing, perspiration, crocking and hot wet pressing.

PYRAZOL FAST ORANGE RNN
(Sandoz)

A new product, the shade of which is reported to be approximately half-way between Pyrazol Fast Orange 2RN and GLL. It has the usual high fastness properties characteristic of the Pyrazol Fast line though noticeably faster to light in th Fade-Ometer than the old Pyrazol Fast Orange 2RN. Especially recommended by the manufacturers for "union" upholstery fabrics because it only stains wool lightly, leaves acetate white, and only stains nylon slightly. Cotton and viscose dye a very good union.

PYRAZOLINE BLUE 2RLCF
(Pharma)

A very bright, clear shade of blue for cotton and viscose. Nylon and Celanese remain white, while silk and wool are very slightly stained. The general properties are said to be excellent, including the light fastness. The product may be aftertreated with urea formaldehyde resin with full retention of shade and improvement of wet fastness properties.

PYRAZOLINE ORANGE 2GCF
(Pharma)

A bright, clear shade of orange for cotton and viscose. Reserves nylon, acetate, silk and wool white. The general wet fastness properties are said to be very good and the light fastness also very good. Suitable for aftertreatment with urea-formaldehyde resin.

PYRAZOLINE ORANGE RCF
(Pharma)

A bright, clear shade of orange for cotton and viscose. Reserves nylon, acetate, silk and wool perfectly white. The general wet fastness properties are said to be very good as is the light fastness. Suitable for aftertreatment with urea-formaldehyde resin.

PYRAZOLINE RED 6BLL
(Pharma)

A very rich, bluish shade of red for cotton and viscose. Reserves nylon and acetate white, staining silk and wool slightly. The general wet fastness properties are said to be good. It may be aftertreated with urea-formaldehyde resin, which improves the wet fastness. The light fastness is reported to be excellent.

RESOFIX BLUE GLN
(Sandoz)

A new fast to light direct blue, especially adapted to aftertreatment with Cuprofix, Resofix CU or with urea-formaldehyde or melamine. The shade of the product is reported to be unaffected by resin treatments, with no loss in its excellent light fastness by urea-formaldehyde and only a negligible amount by melamine. The product shows an excellent reserve of acetate.

RUCEL BROWN VP
(Rutherford)

An economical medium shade of acetate

brown said to possess good fastness to perspiration and washing; also a very good jig dyeing color.

RUCEL FAST NAVY BLUE LA
(Rutherford)

An excellent jig dyeing acetate navy said to be of considerable fastness to atmospheric fading. Uniform dyeings are obtained either at low or high temperatures.

SANDONE BLUE R AND RG PASTE
(Sandoz)

Two new vat dyestuffs announced by Sandoz and recommended by them for the economical production of full navy blue shades where excellent fastness to the No. 3 Wash Test is desired. The two products have a reducing temperature of 150°-160°F and a preferred dyeing temperature of 140°-160°F.

SOLOPHENYL* BRILLIANT BLUE BL
(Geigy)

It is claimed that this new product yields brilliant greenish shades of blue with excellent light fastness on cotton and viscose rayon. It is especially suited for producing uniform shades on blends of the two fibers, as it dyes them both to the same depth and shade. It is felt by the producers that this product will prove to advantage on cottons and rayons wherever the end use requirements call for exceptional brightness and the best in light fastness.

* Registered Trade Mark

SOLOPHENYL* BROWN BL
(Geigy)

It is stated that there has long been a need for a homogeneous direct brown which would have good fastness to light and at the same time reserve acetate. The manufacturer feels that Solophenyl Brown BL goes a long way toward filling this need, for with it full shades of brown, possessing the light fastness of the well known Solophenyl series can be obtained and at the same time the acetate effects are well reserved. It is also stated that the color shows very little change when subjected to urea-formaldehyde crease proof finish and that said finish has very little influence on the excellent light resistance. It is also said that another outstanding feature of this dyestuff is its unique property of dyeing rayon and cotton the same shade and depth—in this respect, it is unlike the great majority of direct colors which have a tendency to dye the rayon noticeably heavier than the cotton.

* Registered Trade Mark

SOLOPHENYL* VIOLET BRL
(Geigy)

This product is reported by the manufacturer to be probably one of the fastest to light direct violets ever introduced—it produces an extremely bright reddish shade of violet with high all around fastness and is expected to prove an excellent dyestuff for use on cottons and rayons where brightness and good light fastness are required. It is well adapted for use with urea-formaldehyde crease proof finish—said finish, it being said, having little effect on the shade and light fastness of the dyestuff.

* Registered Trade Mark

SULFONINE GREY BWL
(Sandoz)

A new acid or neutral dyeing color reported to have fastness properties practically equal to most chrome dyes. Because of its high light fastness, it is ideally suited for combining with the very fast Alizarine Milling Colors for dyeing of yarn, top, stock or piece goods. The manufacturer has recently changed the name to Lanasyn Grey BL.

SULFONINE SCARLET GWL
(Sandoz)

A new color in the milling group reported by the manufacturer to surpass other reds in the Sulfonine line in fastness to washing, fulling, light and stoving. It is highly recommended by the producer for the dyeing of chlorinated top or yarns for washable knitted materials. It is stated that, because of its excellent fastness to stoving, it is of great value in the dyeing of blankets. The maker also recommends it for silk because of its very good fastness to light, washing and water, where it surpasses Sulfonine Brown 2R often used as a reddening component.

SUPRANOL YELLOW GGA CONC CF
(General Dyestuff)

A straight, pyrazolone-azo acid dyestuff (CI 642), which gives medium-yellow shades on wool said to be characterized especially by very good wet fastness and also good to very good fastness to light. As one of the Supranol series of dyestuffs that dye best from a weakly acid dyestuff and yet draw very well from a neutral solution, this yellow is reported to be eminently suitable for union dyeing, particularly for mixtures of spun rayon and wool.

VIALON FAST YELLOW G
VIALON FAST YELLOW R
VIALON FAST ORANGE R
VIALON FAST RED B
VIALON FAST RED G
VIALON FAST VIOLET B
VIALON FAST NAVY BLUE R
VIALON FAST GREEN FFG
VIALON FAST OLIVE B
VIALON FAST BROWN GR
VIALON FAST BROWN R
VIALON FAST BLUE GREY B
VIALON FAST BLACK G
VIALON FAST BLACK R
(Nova)

The Vialon Fast colors are new water soluble dyestuffs which dye nylon (filament, spun and raw stock) to yield a full range of shades said to be of excellent fastness to light, washing, cross dyeing, perspiration and sea water. The Vialon Fast colors may be applied from a neutral or slightly ammoniacal bath, both to nylon and wool. In combinations of nylon and wool, they give tone in tone dyeings. Further, the Vialon Fast colors are said to dye Dynel to give dyeings of all around fastness, particularly to light. With the exception of Vialon Fast Black G and Fast Black R, these colors can be applied to Dynel from a slightly acid bath without the necessity of previously swelling the fiber with a swelling agent or recourse to the cuprous ion method.

VITROLAN GREEN BL
(Sandoz)

A new member of the metallized group of dyestuffs known for their level dyeing properties on carbonized piece goods. Fastness properties are said to be rated very good to light, washing, water, perspiration and stoving. The new product is considerably brighter than the older type Vitrolan Dark Green B.

VITROLAN ORANGE GRE
(Sandoz)

A new orange of the metallized type, considerably redder in shade than the older Vitrolan Orange G, but slightly yellower than the R type. The new brand possesses similar fastness and level dyeing properties of the G brand.

XYLENE FAST BORDEAUX P
(Sandoz)

The newest addition to the Sandoz line of "P" Colors, the series of dyes having a similar rate of dyeing and exhaustion. Like other members of the series, this color is reported to have very good fastness to light, water, washing, perspiration, carbonizing and decatizing. The product has a rich bluish tone which, when combined with other Xylene Fast "P" Colors, produces a wide range of red and wine shades. Like other colors in the group, it is best applied in a pH range of 5.5 to 5.8 under which conditions it has a degree of leveling or migration equal to most sulfuric-acid-dyeing types. It is also recommended by the manufacturers for nylon and silk.

TEXTILE CHEMICALS

ACCOSIZE MM
(Amalgamated)

A water soluble polyacrylic salt for the improvement in hand of various fabrics. This finish is said to be especially suitable for wool, giving improved hand and increase in weight. Is very soluble and can be applied quickly and easily.

AHCO FINISH 1333
(Arnold, Hoffman)

An homogenized liquid emulsion with 48% active ingredients. It is a lubricant and softener for mercerized and unmercerized cotton knitting yarns. It is stated that it has shown outstanding results when applied in an emulsion trough to yarns to be run on high speed knitting machines.

AHCO NYLON WARP SIZE
(Arnold, Hoffman)

A specially blended size for nylon warps. Also of interest for Dacron. Applied to filament nylon it is said to provide enough adhesion to hold the nylon filaments together as well as providing proper lubrication to prevent chafing during weaving operations. Presents no problem in size removal and also minimizes static generation. This product is alkaline in nature and offered as a viscous pourable liquid.

AHCOVEL RM
(Arnold, Hoffman)

An anionic substantive softener which is said to show excellent resistance to yellowing due to high temperature processing. It is especially recommended by the manufacturers for use in resin formulations for tightly woven white goods. Gives outstanding softening whether applied alone or in combination with other finishes.

ALBATEX* PO
(Ciba)

Albatex PO is the salt of a high molecular weight organic sulfonic acid and belongs to the group of anion active substances. It is said to be an efficient levelling, retarding and penetrating agent which can be applied in neutral or alkaline baths. It is recommended by the manufacturers in the dyeing of vat, sulfur, direct and acetate colors.

* Reg. Trade Mark.

ALBATEX* POK
(Ciba)

Albatex POK is a nonfoaming levelling, retarding and penetrating agent similar to Albatex PO in properties. It is especially recommended by the manufacturers in such applications where foaming is to be held to a minimum. Like Albatex PO, it is used in the dyeing of vat, sulfur, direct and acetate colors.

* Reg. Trade Mark.

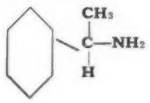
ALKAMINE POWDER OBX
(Amalgamated)

A scouring compound used in conjunction with Evenate OBX for the one-bath scouring and dyeing of nylon hosiery. It is stated that it gives excellent union, full depth and clarity of shade with substantial saving in time and labor.

ALKAPEN 80-W
(Burkart-Schier)

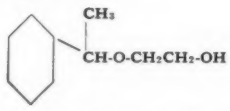
A penetrant for high-strength caustic such as used in plisséing.

ALPHA-METHYLBENZYL AMINE
(Carbide and Carbon)



Water-white liquid, mild ammoniacal odor. MW, 121.18; Sp G, 0.9535 at 20/20°C; RI (n_D at 20°C), 1.5366; BP, 188.5°C at 760 mm; VP, 0.5 mm Hg at 20°C; Fr P, sets to a glass below —65°C; sol in water, 4.8% by wt at 20°C; sol of water in, 48.0% by wt at 20°C; Flash Point, 175°F (Cleveland open cup); soluble in most organic solvents and hydrocarbons. Chemical properties: undergoes typical reactions of aliphatic primary amines; usual reactions on the benzene ring are possible when the amine group is protected by acetylation. Suggested uses: Preparation of amine salts and amides; emulsifying agents; gas-fade "resists" and textile specialties. Available in commercial quantities.

ALPHA-METHYLBENZYL "CELLOSOLVE"*
(Carbide and Carbon)

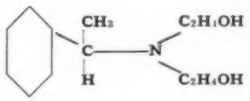


Water-white, mobile liquid with mild pleasant odor. MW, 166.21; Sp G, 1.0395 at 20/20°C; BP, 253.5°C at 760 mm Hg, 160°C at 50 mm Hg, 121°C at 10 mm Hg; VP, 0.02 mm Hg at 20°C; Fr P, sets to a glass below —50°C; sol in water, 0.22% by wt at 20°C; sol of water in, 13.3% by wt at 20°C; Abs Visc, 21.4 cps at 20°C; RI (n_D at 20°C), 1.5125.

alpha-Methylbenzyl "Cellosolve" is an aryl substituted alkyl glycol-ether and exhibits an extremely low solubility in water and a relatively high solvency for water. This property suggests its use as a coupling agent for water in certain water-immiscible systems. It is also suggested for trial as a high-boiling solvent for printing pastes and dyestuffs and for use as an intermediate in the synthesis of plasticizers and germicides. Availability: Research quantities.

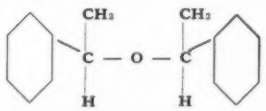
* Trade Mark.

ALPHA-METHYLBENZYL DIETHANOLAMINE
(Carbide and Carbon)



Pale yellow liquid, mild amoniacal odor. MW, 209.28; Sp G, 1.0812 at 20/20°C; RI (n_D at 20°C), 1.5392; BP, 244°C at 50 mm; VP, <0.01 mm Hg at 20°C; Fr P, sets to a glass below —7°C; sol in water, 5.3% by wt at 20°C; sol of water in, 28.0% by wat at 20°C; Flash point, 370°F (Cleveland open cup); soluble in most organic solvents. Chemical properties: undergoes reactions typical of aliphatic tertiary amines, usual reactions on the benzene ring are possible when the hydroxyl groups are protected by acetylation; forms quaternary bases by reaction with alkyl halides. Suggested uses: preparation of amine soaps for use as surface-active agents; preparation of quaternary ammonium salts for detergents and germicides. Available in commercial quantities.

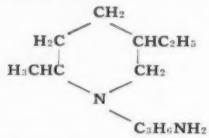
ALPHA-METHYLBENZYL ETHER
di(1-phenyl ethyl) ether
(Carbide and Carbon)



Water-white, mobile liquid with faint odor. MW, 226.30; Sp G, 1.0017 at 20/20°C; BP, 286.3°C at 760 mm; VP, <0.01 mm Hg at 20°C; Fr P, sets to a glass below —30°C; Sol in water, <0.01% by wt at 20°C; Sol water in, 0.1% by wt at 20°C; Flash point, 275°F (Cleveland open cup); soluble in most organic solvents. Chemical properties: dehydrates readily to styrene; hydrolyzes under acid conditions to phenyl methyl carbinol; other reactions typical of secondary aliphatic ether; most reactions

on benzene ring result in poor yields beause of tendency to dehydrate to styrene and polymerize. Suggested uses: high boiling inert solvent (except under dehydrating conditions); softener for synthetic rubbers. Available in commercial quantities.

N-(3-AMINOPROPYL)-2-METHYL-5-ETHYL PIPERIDINE
(Carbide and Carbon)



MW, 204.208; Sp G, 0.886 at 20°/20°C; BP, 91°C at 3 mm Hg; colorless liquid. Chemical properties: Undergoes reactions typical of primary and tertiary amines. Suggested uses: Intermediate for the preparation of textile-finishing compounds and resins. Availability: Research quantities for experimental use.

AMMONIUM GLUCONATE
(Pfizer)

Ammonium gluconate is a useful auxiliary for the textile printer. It is available as a white, crystalline powder. This salt is near-neutral in solution. However, upon steaming ammonium gluconate breaks down forming free ammonia and gluconic acid. Therefore, it finds use as a latent acid catalyst in textile printing. In addition, ammonium gluconate is a sequesterant for a number of metallic ions which are troublesome in textile processes.

AMMONIUM PERSULFATE
(Becco)

Becco Ammonium Persulfate, technical grade, contains approximately 6.6% active oxygen. It is a useful oxidizing agent of high solubility and of particular interest for the development of vat and sulfur dyes, desizing of textiles and modification of starches.

AMPITOL A
(Dexter)

An anionic softener substantive to cotton, acetate, viscose rayons and nylon which is said to produce a high degree of softness without affecting the light fastness of direct colors and does not yellow whites. Resists dry cleaning and washing, dissolves in neutral and alkalines solutions, compatible with anionic agents under normal processing conditions and with starch, dextrines, gums and similar substances. Not for strong acid baths. When used on the acid side, light fastness properties are slightly affected but all other results are completely satisfactory.

AMPITOL KZA
(Dexter)

A complete departure from all known softening agents and other finishes, it is said to be completely substantive to cotton, acetate, viscose rayons and nylon. Under normal processing conditions, it does not precipitate with anionic or cationic substances and it can be used with acids, alkalis, resins and copper salts, and is compatible with starch, dextrines, gums and similar substances. Dissolves readily in hot water, resists dry cleaning and washing. It is claimed that, because of its exceptional finishing characteristics, it produces a variety of effects in processes which heretofore had to exlude the use of a substantive softener.

AMPITOL KZ3H
(Dexter)

Substantive softener which combines the advantages of both Ampitol A and KZA and is said to produce a high degree of softness upon cotton, acetate, viscose rayons and nylon. Resists dry cleaning and washing. Soluble in neutral, acid and alkaline solutions and unaffected by hard water, it is compatible with anionic and cationic agents under normal processing conditions and is also compatible with starch, dextrines, gums and similar substances. Can be applied in the dyeing operation or as an after-treatment of processed goods without need for rinsing goods free of anionic agents.

AMPITOL ZR
(Dexter)

A true cationic softener which is said to be substantive to cotton, acetate, viscose rayons, and nylon, producing an exeptional degree of softness at low cost. Resists dry cleaning and washing and has excellent gas inhibiting properties. It is not compatible with anionic agents such as soap, sulfated oil, etc., however, it readily dissolves in hot water and is compatible with starch, dextrine, gums and similar substances. Besides producing a permanently soft hand it prevents chafe marks and similar processing damage to rayons and nylon. Can be applied either as a final rinse in dye back or by padding.

ANSTAC TA-2
(Vikon)

The product is an anti-static agent for nylon and other hydrophobic fibers. It resists development of color in the presence of synthetic resins during drying on white fabrics.

ANTHRAPOLE DO
(Arkansas)

Anthrapole DO is a dye bath assistant which is offered particularly for use in dyeing Dacron. When used with dyestuffs which do not dye this fiber satisfactorily under ordinary conditions, this product is said to yield good color values and uniform shades. For best results, it is desirable to give the material a light scour preliminary to dyeing. In most cases, it is necessary to use from 20% to 30% Anthrapole DO on the weight of the material, and this is best added to the bath at room temperature before adding the dyestuffs. The dye bath is then heated to the desired temperature, and the dyeing procedure carried out in the usual manner. In appearance, Anthrapole DO is an amber colored liquid which forms a stable milky emulsion when added to water. It has a characteristic pungent odor, and should be used under conditions affording good ventilation.

ANTIFOAM AF
(Laurel)

A stable organic compound which, it is stated, will eliminate foam on all type applications. May be used in size baths, dyebaths, and all phases of the finishing operation where the removal of foam is desirable.

ANTI-FUME S SOLUTION
(Du Pont)

A new inhibitor for protecting acetate material colored with acetate dyes from fading due to atmospheric gases is being marketed by the Du Pont Company under the name of Anti-Fume S Solution. This product contains the anti-fume agent in a high-boiling solvent that has a high flash point for safe operation.

ANTI-STAT WT
(Arkansas)

Anti-Stat WT, as its name implies, is an agent useful in minimizing the accumulation of static charges on many of the newer synthetic fibers. For most applications, it is necessary to use between 1% and 2% of this product, on the basis of the bath. In some cases, it may be mixed with a lubricating agent or finish to avoid an extra operation. Preliminary to its use, it is desirable to make a pre-mix in water, at or near the boil using one part to eight to ten parts of water. Under these conditions, Anti-Stat WT is readily dispersed on further dilution in hot water. In physical appearance, Anti-Stat WT is a firm colorless paste which is essentially nonionic in character. The pH of a water solution is definitely alkaline, being in the range of 10 to 10.5 and when used with products having a low pH such as cationic finishes, it is desirable to adjust the pH of Anti-Stat WT to approximately neutral before use.

ARCTIC SYNTEX HD
(Colgate)

This heavy duty synthetic detergent product is a compound of alkyl aryl sulfonate, polyphosphate alkalies plus other detergent

additives, in spray dried bead form. It is stable in hard water, as well as in acid or alkaline solutions. Arctic Syntex HD is said to possess excellent detergent properties and is recommended by the manufacturers for scouring all types of fibers and fabrics.

ATANOL BS
(Dexter)

Atanol BS, an anionic softener, is said to be especially effective on knit cottons and rayons which are to be heavily weighted with ureas or sugars.

Consisting of sulfonated synthetic waxes and sulfated alcohols, Atanol BS may be used as a softener for cotton, acetate, viscose and all synthetics, it is reported. It does not discolor whites or affect the light fastness of colors, it is claimed, and is compatible with starches, dextrines, sugars, gums and urea. It is said to be resistant to dilute solutions of acids and alkalies. The pH of a 0.1% solution is 7 to 7.5.

It is pointed out that with application by either pad, quetsch or Tube-tex machine, 2 to 3% on the weight of the fabric is satisfactory. For heavily weighted knit goods, a higher percentage of Atanol BS is sometimes required.

ATCO ANTISTATIC 50D-NF
(Atco)

A water soluble nonfoaming antistatic agent which is said to effectively prevent the generation of static electricity in processing and handling of nylon, Orlon, and any other fiber where static is a problem. The product is applied by simply wetting the goods with a .25% solution of the product by any conventional means and drying the Anti-static D-50 NF into the goods. Goods treated with Atco Antistatic D-50 NF are not altered appreciably in hand. The product is free-rinsing and can be very easily removed if desired. Since Atco Anti-static D-50 NF is compatible with most of the finishing agents now being used in the textile trade, it can be applied in combination with other products to produce an anti-static finish with any other properties desired.

ATCO FINISH 81
(Atco)

This product is a water-soluble finishing agent which imparts a stiff, full-bodied hand to all fabrics. It is especially recommended by the manufacturers for use with water repellents and other finishing agents in which ordinary gum finishes are incompatible. The product is stable in the presence of relatively high concentrations of acids, metallic salts, and most cationic materials.

ATCO FP
(Atco)

A high molecular weight amino compound which is said to impart durable resistance to atmospheric fading to fabrics dyed with acetate dyestuffs. The product is self emulsifiable and can be applied in the dye bath by the procedures normally used for applying acetate colors.

ATCO GRAPHITE REMOVER NF
(Atco)

This product was compounded to be used for the efficient removal of graphite from nylon and other synthetic lace fabrics. Since the product does not foam, even under extreme conditions, the waste and production losses caused by the excessive foam normally encountered in lace scouring are eliminated.

ATCO LEVELLER NF
(Atco)

Nonfoaming, penetrating agent for use with acid dyestuffs. Especially recommended by the manufacturer for dyeing tippy wool. It is stated that the nonfoaming nature of the product eliminates the nuisance caused by excess foam normally produced by other levelling and penetrating agents used in the trade.

ATCO LIGHT DULLER CA #5
(Atco)

This product is a free-flowing cationic active pigment dispersion. It is said to have excellent covering power and produces a soft mellow hand on treated fabrics. Dispersions of Atco Light Duller CA #5 are unusually stable and show practically no sedimentation even after standing several hours. Atco Light Duller CA #5 is recommended by the manufacturers for use on any fabric where effective delustering and a soft mellow hand are desired.

ATCO METAPERM KG-NF
(Atco)

This product is a nonfoaming water phase pigment binder which produces prints said to possess excellent wash and dry-cleaning fastness. It is especially recommended by the manufacturers for binding metallic pigments. The nonfoaming nature of the product makes it especially adaptable for use on high-speed machines.

ATCO MILDAIRE A-200
(Atco)

A solvent-soluble solution of copper-8-quinolinolate compounded with water repellent ingredients. Produces a mildew and rot resistant finish with low dynamic absorption. The product is readily soluble in most petroleum solvents and is particularly adapted for processing tapes, webbings, and similar materials to meet Government specifications. It is stated that Atco Mildaire A-200 contains 10% Copper-8-Quinolinolate and sufficient water repellent materials to pass all tests required for this type of finish.

ATCO MULSION P
(Atco)

A nonionic wax emulsion containing 50% solids and said to be stable to acids, alkalis, and electrolytes. Adapted to caustic and acid resist printing and any other application where a highly-stable wax emulsion is desired.

ATCO PLISSEE PENETRANT
(Atco)

This product was especially developed for use as a penetrant in very highly concentrated caustic solutions. It is most efficient in caustic baths ranging from 60 to 80° Tw. At this concentration, Atco Plissee Penetrant is claimed to be an excellent wetting agent and produces good results in caustic plissé work and other applications where ordinary wetting agents cannot be used.

ATCO RIBBON FINISH
(Atco)

This product is a water-soluble alkyd resin which is said to impart a stiff, resilient hand to all fabrics. It is especially recommended by the manufacturer for acetates and other synthetics where a stiff, lustrous finish is desired with a minimum of mark off. The product is readily soluble in water at any temperature and can be applied in a pad, quetsch or any similar machine.

ATCO WATER REPELLENT WM
(Atco)

A water-dispersible emulsion of waxes, metallic salts, and dihydroxydichlorodiphenylmethane. Produces a combination water repellent, mildew proof finish by simply dispersing the product in water and applying to the goods in a pad or any similar machine normally used in textile processing. Fabrics treated properly with Atco Water Repellent WM are said to have a high spray rating and excellent resistance to hydrostatic pressure. This finish also passes most of the mildew proofing requirements given in Government specifications as well as civilian uses. Atco Water Repellent WM contains 6.6% Dihydroxydichlorodiphenylmethane and 26.6% high-melting wax.

ATCO WATER REPELLENT 13 WM
(Atco)

A water-dispersible emulsion containing 13% dihydroxydichlorodiphenylmethane designed for use with water repellents to produce a combination water repellent,

mildew resistant finish in one bath. The product is readily dispersible in water along with the conventional one-package nondurable water repellents on the market. It is stated that the use of Atco Water Repellent 13 WM in combination with water repellents will produce a finish with any degree of water repellency and mildew resistance desired by simply adjusting the ingredients of the bath to produce the desired results.

ATCODRI LV
(Atco)

A low-viscosity, one-package, zirconium base water repellent. The product produces a semi-durable water repellent finish with practically no tendency to mark off, and the hand of the treated fabric is not altered appreciably. Atcodri LV is especially recommended by the manufacturer for nylon and acetate fabrics which are rather difficult to water repel with conventional one package water repellents.

ATCONIL DAC-25
(Atco)

A combination of surface-active agents especially developed for pasting and dispersing acetate colors. The use of Atconil DAC-25 is said to eliminate tarring and spotting of the dyestuff, promote even penetration of the dyestuff into the fabric, and eliminate a scumming on the surface of the dyebath.

AULABRITE* ANTIFOAM 221
(Aula)

For use wherever severe foaming conditions indicate the introduction of an antifoam.

* Trade Mark Registration Applied for

AULABRITE* BRONZE CLEARS 771, 773, 771-7, 773-9, 777, 779
(Aula)

Binders for metallic pigments said to give washable and dry cleanable prints with good brightness and satisfactory resistance to flaking.

* Trade Mark Registration Applied for

AULABRITE* BRONZE CLEARS 888, 889
(Aula)

Binders for metallic pigments to give maximum brightness combined with satisfactory resistance to laundering, dry cleaning and flaking.

* Trade Mark Registration Applied for

AULABRITE* EXTENDER 818-5
(Aula)

An extender to be used with Aulabrite colors to obtain maximum crock resistance.

* Trade Mark Registration Applied for

AULABRITE* EXTENDER CONCENTRATES 751, 752, 766, 814-4
(Aula)

Oil-in-water resin dispersion for use in the preparation of Aulabrite Extenders to be used with Aulabrite Colors.

* Trade Mark Registration Applied for

AULABRITE* EXTENDERS 627-1R, 608-1, 501-1, 502-1
(Aula)

Ready-for-use Extenders to be used with Aulabrite Colors.

* Trade Mark Registration Applied for

BLACKOUT NO. 10
(Burkart-Schier)

A new carbon, grease and iron stain remover containing no oxalic acid nor oxalates.

BRITEGEL 103-106
(Colloids)

Exceptionally clear gelatines for non-mark-off finishes for rayon and acetate fabrics.

BURKEM 288-X
(Burkart-Schier)

A solvent modified sulfated fatty ester. For use as a wetting agent and detergent, particularly for knit synthetics. It is said to have good dye levelling properties and to prevent chafing in the dye beck.

BURKOTES
(Burkart-Schier)

A series of compounded latex emulsions for various textile applications such as backing, coating, impregnating, etc.

BURK-SCHIER* FINISH 100
(Burkart-Schier)

A new substantive softener said to have good light, heat and aging stability. It is intended for bleached and pastel-dyed goods.

* Registered Trade Mark.

BUTYL 2-ETHYLBUTYL MALEATE
(Carbide and Carbon)

$C_4H_9OCOCH{=}CHCOOCH_2CH(C_2H_5)CH_2CH_3$

MW, 256.3; Sp G, 0.981 at 20/20°C; BP, 135°C at 1 mm Hg. Chemical properties: Undergoes Diels-Alder reaction with conjugated dienes and addition reactions characteristic of compounds containing the ethylenic linkage; polymerizes and copolymerizes with other ethylenic monomers. Suggested uses: preparation of resins for use in coatings and textile specialties. Availability: research quantities.

CALSOLENE OIL HSA
(Arnold, Hoffman)

An anionic penetrant and dyeing assistant which offers a wide range of compatibility in acid, neutral and alkaline media. It is said to have excellent stability to mineral and organic acids, Epsom salts and hard water. It minimizes chafing and crocking in beck dyeing of piece goods.

CARBO-PENTRO #133
(Organic)

A fatty alcohol sulfate, used as a wetting agent and detergent. The product is readily soluble in water in all proportions and at any temperature, is stable in the presence of acids, alkalies, and salts and can be stored indefinitely. It is stated that a cold 0.5%—1% solution will wet out wool cloaking in a matter of seconds. Because of its high stability, Carbo-Pentro #133 is especially recommended by the manufacturers as a carbonizing assistant in the processing of woolen piece goods.

CATALIN* RESINS 8168 AND 8169
(Catalin)

Urea-formaldehyde-latex resins recommended by the manufacturers for use on natural and synthetic fibers to attain durable finish, stiffening, and abrasion resistance.

* Registered Trade Mark.

CATALIN* RESIN 8171
(Catalin)

Urea-formaldehyde monomeric liquid solution recommended by the manufacturers for use on natural and synthetic fibers to attain crush resistance, durable finish and shrinkage control.

* Registered Trade Mark.

CATLOID 453/3
(Colloids)

Cationic softener for imparting soft hand and finish and loft to velours and similar pile fabrics.

CERALOID 514
(Colloids)

A coconut stearic compound finish for soft, full hand.

CHARLAB* CATAYLST AL
(Charlotte)

An ammonium lactate catalyst, containing approximately 38-40% ammonium lactate, used for urea formaldehyde resins.

* Registered Trade Mark.

CHARLAB* ROLLER CLEANER
(Charlotte)

Charlab Roller Cleaner is a new type of solvent that is wiped, brushed, or sprayed on rubber or composition rollers in dye houses and finishing plants. It is allowed to remain for approximately five minutes

* Registered Trade Mark.

and then flushed off with cold water. It is claimed that Charlab Roller Cleaner will remove dyestuff, waxes, oils, finishes, resins, grease, etc. in a matter of minutes without scrubbing. It is nontoxic, noncaustic and safe.

CHELOID 20
(Colloids)

A sequestering agent said to be of high efficiency and low cost.

CHEMSOL 760
(Synthron)

This liquid antistatic agent is recommended by Synthron, Inc for use wherever static is a problem in textile plant processing. Chemsol 760 is said to be a highly concentrated (13% moisture) readily-soluble dispersant which is stable to caustic and acid conditions and compatible with most textile chemicals. It reportedly improves vat dye penetrations, is useful in getting even dyeing on Orlon, Dacron, dynel, Acrilan, and is nonfoaming when used in concentrations below ½%.

CHEMSOL 940
(Synthron)

This antistatic softener reportedly shows remarkable stability while combining the best antistatic and softening properties. It is said to be stable in alkaline baths and compatible with most alkaline finishing agents. Chemsol 940 imparts improved hand to synthetic fabrics while eliminating static problems under proper application, it is claimed.

CHEMSTAT AA
(Synthron)

This anionic antistatic agent is said to be substantive to the newer synthetic fibers and to impart softening as well as antistatic properties. Chemstat AA is applied from an alkaline bath and is compatible with resins and other alkaline finishing agents, it is stated. It shows remarkable heat stability, according to Synthron.

CHEMSTAT CC
(Synthron)

This cationic antistatic softener shows good durability to dry cleaning and washing. It is stated that the substantive properties make this antistatic economical to use while giving the consumer the maximum of protection in finished garments of the newest synthetic fabrics.

CLORPACTIN* CXW
(Guardian)

A white powder, claimed to be highly effective and fairly stable, for color stripping of nonfast dyes on many fabrics such as acetate, rayon, etc., and for bleaching with a minimum loss of tensile strength of the fabrics treated. It is also said to be suitable for treatment of process water in dye houses to prevent growth of fungus and similar organic matter, and for treating dye house wastes to discharge color and substantially decrease the B O D.

* Trade Mark.

COLD-BRAID (6941-A)
(Paisley)

Diluted with water to form an emulsion, it is used for single-end sizing of filament yarns or for spinning of paper twines. Exceptionally fast drying, it requires no drying equipment with application between two types of packages, from one to another over a short span.

Other uses are braiding, thread dressing, finishing shoe laces and narrow fabrics.

COMPOUND #6604
(Berg)

A new garnetting lubricant which leaves no oily residue on the stock. This feature is said to make subsequent scouring unnecessary, and is especially advantageous for padded linings, etc.

CONCO ANTI FUME FR
(Continental)

A concentrated commercial type inhibitor said to possess the highest resistance to gas fading.

CONCODYEFIX FR
(Continental)

A new resin type dye fixing agent for direct and naphthol colors, designed to prevent crocking and bleeding caused by water, sea water and perspiration.

CONCO INHIBITOR FR
(Continental)

A unique durable inhibitor, simply applied with the dyestuffs, without delicate control of exhaustion temperatures, and with minimum possibilities of yellowing.

CONCO VA
(Continental)

The manufacturer states that Conco VA has been extraordinarily successful in the removal of graphite, loom grease, dirt and foreign matter from woven or knitted nylons, acetates, etc. Whether the graphite and grease be merely in the warp as on acetate piece goods or spread like dyestuff throughout the lace, Conco VA is definite in its cleaning properties, it is stated.

Pointing out that ordinary solvents with an emulsifying agent are not adequate, Continental states that Conco VA exerts a positive action on the graphite and loom grease, not merely suspending the removed dirt, but keeping the solubilized iron in suspension.

COPRANTEX B
(Ciba)

Coprantex B is a copper salt resin complex, recommended by the manufacturers for increasing the wash fastness properties of all the Coprantine dyes, as well as a select group of Chlorantine and direct dyes. Coprantex B can be used in conjunction with urea formaldehyde resin, in the finishing bath to give increased fastness to washing and perspiration.

COT-GLUE (6967)
(Paisley)

Coated on interior surfaces of leather cots, it forms a smooth film, which, it is claimed, may be re-moistened to yield the tackiest, stickiest glue to adhere to steel spinning rolls. It sets quickly.

Cot-Glue will mend a wide variety of articles.

CRESOPEN K
(Richmond)

A high solvency cresyllic compound to be used with soap. It is claimed that it helps lift soap after fulling and has tremendous oil removing ability.

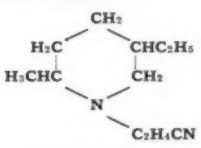
CROLENE L
(Crown)

An aqueous dispersion of waxes for treatment of all types of fabrics to impart softness, body and increased lubricity to facilitate cutting and sewing.

CROLOK A
(Crown)

A water-soluble resin for semi-durable treatment of synthetic fiber fabrics to prevent slippage and fraying of yarns.

N-(2-CYANOETHYL)-2-METHYL-5-ETHYL PIPERIDINE
(Carbide and Carbon)



MW, 200.176; Sp G, 0.921 at 20°/20°C; BP, 100° C at 3 mm Hg; colorless liquid. Chemical properties: Undergoes reactions typical of tertiary amines and nitriles. Suggested uses: Intermediate for the preparation of textile resins. Availability: Research quantities for experimental use.

DELECTROL 377-378
(Colloids)

Anti-static agents in liquid form for use in the blending of natural and synthetic staple fibers; in warping and sizing operations; fabric finishing.

DERGOPAL B
(Arkansas)

Dergopal B is an optical bleaching agent for use with cellulosic fibers and fabrics, as an after-treatment. It is also useful in connection with the peroxide bleaching of cotton knit goods, and it has been found possible, in many cases, to reduce the amount of peroxide used in the bath. The amount of Dergopal B may be as low as 1% on the weight of the material. Through use of this product, in the bleach bath, an excellent white is said to be obtained without the necessity of additional processing. It is stated that goods treated with this product, show excellent resistance to yellowing when exposed in the Fade-Ometer. In physical consistency, Dergopal B is an opalescent amber colored liquid readily soluble in water at all temperatures.

DERGOPAL C
(Arkansas)

Dergopal C is an optical bleaching agent for use on wool and wool fabrics. It may also be used on nylon and acetate materials. This product is particularly useful in the scouring and bleaching processes. Dergopal C contains a highly efficient synthetic detergent in addition to the optical bleaching agent, and therefore, performs the double function of cleaning and whitening woolen materials. In general, 2% to 5% of Dergopal C on the weight of the wool being processed, is sufficient to yield maximum results. It is desirable in using this product, to keep the bath definitely on the alkaline side with a minimum pH of about 8.0. As a pre-treatment for dyeing, it has been found that brighter shades are produced, particularly in pastel shades. Dergopal C is an opalescent amber colored liquid, which is readily soluble in water at all temperatures, having a pH of about 8.5.

DETERGENT ALKYLATE NO. 2
(Atlantic Refining)

A raw material for sulfonation to produce an alkyl aryl sulfonate. It is a blend of alkyl benzenes in which the structure and molecular weight has been designed to maximize the desirable qualities of the sulfonated products. The more important of these are wetting ability, detergency, foaming characteristics, reduction of interfacial and surface tension, color and odor.

DEXTROL DULLER #3925
(Dexter)

A high titanium-content dulling agent in highly dispersed form, particularly effective with urea-formaldehyde resins, for viscose and acetate fabrics. Claimed to be excellent as a dulling agent with resins for hosiery finishing. Readily disperses in cold water and pigments remain well dispersed when diluted.

N,N'-DI-(ALPHA-METHYLBENZYL) ETHYLENE DIAMINE
(Carbide and Carbon)

Pale yellow, mobile liquid soluble in most organic solvents; limited solubility in water. MW, 268.39; BP, 140°C at 1 mm Hg; Sp G, 0.996 at 20/20°C; RI (n_D at 30°C), 1.5450. Chemical properties: undergoes typical reactions of aliphatic secondary diamines. The two phenyl groups add special properties such as oil solubility and high boiling point. Suggested uses: Intermediate in preparation of amine salts and other addition products with limited water solubility; preparation of rubber chemicals, gas-fading inhibitors and other textile specialties. Available in research quantities for experimental use.

DIAMYL MALEATE
(Carbide and Carbon)

$C_5H_{11}OCOCH = CHCOOC_5H_{11}$

MW, 256.3; Sp G, 0.975 at 20/20°C; BP, 144° C at 1 mm Hg. Chemical properties: reacts to add halogens, hydrogen halides, alcohols, hydrogen cyanide, sodium bisulfite, and acids across the double bond; polymerizes and copolymerizes with other ethylenic monomers. Suggested uses: preparation of polymers and copolymers for use in resin coatings for textiles. Availability: research quantities.

2,4-DICHLOROBENZOIC ACID
(Heyden)

This chemical is recommended by the producers as a carrier for dyeing Dacron piece goods. Dyeings are said to exhibit excellent crock resistance, levelness, and good dye-bath exhaustion. Deep shades are attainable using small quantities of this carrier.

3,4-DICHLOROBENZOIC ACID
(Heyden)

This chlorinated benzoic acid can be used as a carrier for dyeing Dacron. Deep, level shades are said to be attainable. Dyeings are reported to exhibit good crock resistance and fastness. Only small quantities are required in the dyebath.

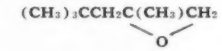
DICHLOROETHYL ETHER
(Mathieson)

Used as an assistant in textile operations such as scouring, kier-boiling and bleaching.

DIETHYLENE GLYCOL
(Mathieson)

Used as a conditioner for textile fibers and yarns and as a dyestuff solvent.

DIISOBUTYLENE OXIDE
(Carbide and Carbon)



MW, 128.21; Sp G, 0.824 at 15/15° C; BP, 132-142° C at 760 mm Hg, 49-56° C at 50 mm Hg. Chemical properties: May be hydrogenated to a C-8 alcohol and isomerized to a C-8 aldehyde. Reacts with compounds containing an active hydrogen atom to add the hydroxy alkyl group. Suggested uses: intermediate in the preparation of surface-active agents, synthetic resins, and synthetic lubricants. Availability: research quantities.

N,N-DIISOPROPYL ETHANOLAMINE
(Carbide and Carbon)

$(C_3H_7)_2NCH_2CH_2OH$

MW, 145.160; Sp G, 0.8742 at 20°/20° C; Boiling Range 185.5-191.7° C at 760 mm Hg; colorless liquid. Chemical properties: Undergoes reactions characteristic of tertiary amines and primary alcohols. Suggested uses: Intermediate for the preparation of dyestuffs, emulsifiers, textile-finishing agents and resins. Availability: Commercial quantities.

DULLOID 414
(Colloids)

A stable, nontitanium base duller with good body.

DYADE—284
(Fancourt)

A dyeing assistant said to produce good unions on nylon full fashion hose. It is claimed to be an excellent dispersing agent for acetate dyes, and its retarding and leveling action cause good color unions between monofilament and multi-filaments when dyeing nylon hosiery.

DYEBOND 20-C
(Stein, Hall)

This product is a water phase resin used as a binder for metallic pigments in screen printing. When used with the proper mesh and shades of gold and silver pigments, it is said to produce excellent retention of color and high luster of print.

DYEBOND 28
(Stein, Hall)

This product is a water phase resin used as a binder for metallic pigments in machine printing. When used with the proper mesh and shades of gold and silver pigments, it is said to produce excellent retention of color and high luster of print.

DYEBOND WM
(Stein, Hall)

This product is a self-contained white overprint and white discharge water miscible resin binder. Sufficient pigment has been incorporated to emphasize white patterns on white grounds without further whitening additives. Dyebond WM is used in conjunction with suitable thickeners such as Stein Hall's Halltex KRS, Tragacanth, etc. It is said to furnish excellent retention of pigment, and superior coverage without curing.

DYEING ASSISTANT #38
(Vikon)

The product is an improved assistant for controlling the union in dyeing monofilament nylon hosiery. It is also a levelling agent for acetate dyestuffs in dyeing spun nylon half-hose, nylon sweaters and nylon tricot.

DYEING ASSISTANT #52
(Ciba)

Dyeing Assistant #52 is a new Ciba product developed for the dyeing of Dacron*. It is said to offer advantages over para phenylphenol in that it is not necessary to predissolve this product with hot caustic soda, or to acidify between the pretreatment and the dyeing. Dyeing Assistant #52 may be diluted with water and added directly to the dyebath; another advantage is that it will leave the Dacron* with a soft and lofty hand.

* DuPont Trade Mark.

DYEING ASSISTANT DWM #5505
(Berg)

A new dyeing assistant of the carrier type for Dacron and Dacron-wool blends. Due to the presence of a surface active agent especially prepared for this compound, a higher color yield is said to be achieved, while, at the same time, level dyeing is assured.

EMKALON AX
(Emkay)

An aliphatic amide condensate intended for use as a nonyellowing anionic substantive softener.

EMKALON CX
(Emkay)

An aliphatic amide condensate for use as a substantive softener. It is said to be resistant to light fading.

EMULSION C4R
(Laurel)

A soluble oil possessing good lubricating qualities. Will form stable emulsions in water. Recommended by the manufacturers for application to cotton and mixed fibers in emulsion form on the winder.

ETHYLENE DICHLORIDE
(Mathieson)

Used as a spotting agent for textile cleaning.

ETHYLENE GLYCOL
(Mathieson)

Used as a starting material for the production of synthetic fibers.

ETHYLENE OXIDE
(Mathieson)

A starter for detergents.

EVANATE OBX
(Amalgamated)

A dyeing assistant used in conjunction with Alkamine Powder OBX for the one-bath scouring and dyeing of nylon hosiery. This method is said to give excellent unions, full shade and show substantial saving in time and labor costs.

FIBA-WELD*PJ
(Onyx)

An improved antislip finish which, it is said, does not unduly build up hand.

FILASEAL DULLER CNX
(Amalgamated)

A one-product dull for use on nylon hosiery. Works well in conjunction with resin as well as type 8 nylon finishes. Said to aid exhaustion of the bath, giving even delustering effect. Easily dissolved and applied.

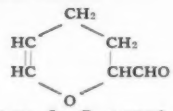
FILASEAL RESIN DDX
(Amalgamated)

A high polymer polyvinyl acetate emulsion said to be of excellent stability and film characteristics. It is stated that it gives excellent body to hosiery with improved snag resistance. May also be used for the finishing of piece goods, narrow fabrics, etc., as well as an adhesive in other types of processing.

FLUOROBLEACH #5400
(Berg)

A new optical bleach compound, said to be highly substantive to wool and fast to both wet and dry cleaning.

2-FORMYL-3, 4-DIHYDRO 2H-PYRAN
(Carbide and Carbon)



MW, 112.12; Sp G, 1.0776 at 20/20°C; BP, 150.6°C at 760 mm Hg; VP, 2.8 mm Hg at 20°C; Fr P, sets to a glass below —90°C; Viscosity, 2.2 cps. at 20°C; RI (n_D at 20°C), 1.4645; Sol in water, complete at 20° C; soluble in most organic solvents. Chemical properties: Hydrolyzes to form alpha-hydroxy adipaldehyde, a polyfunctional intermediate of interest for the preparation of textile resins; aldehyde group reacts with amines, alcohols, phenols, etc.; undergoes addition reactions on double bond when aldehyde group is protected. Uses: chemical intermediate. Availability: development quantities from pilot plant.

FYRAN
(Crown)

A noncrystallizing blend of inorganic salts for treatment of cellulosic fabrics to impart flame resistance.

GLUCONIC ACID TECHNICAL 50%
(Pfizer)

Gluconic acid is a mild, noncorrosive, nonirritating, nontoxic organic acid. The product of commerce is a 50% aqueous solution, light brown in color and possessing an aceteous odor. Because of its nontendering properties, gluconic acid finds use as an acidifying medium in the textile field. Textile printers are said to find this acid of particular interest as the acidifying agent for their formulations as do the users of acid colloid resins.

---

d-GLUCONO-DELTA-LACTONE
(Pfizer)

Glucono-delta-lactone is an inner anhydride of gluconic acid. It is a free flowing, white, crystalline powder which is odorless and stable in air and of very high purity. In solution it is hydrolyzed to gluconic acid. Therefore, it may be substituted for gluconic acid in many applications. It is particularly useful in the application of acid colloid resins where it is said to offer the following advantages: mildness, nontoxicity, better hand, and the elimination of the after-wash.

GOOD-RITE* K-707
(Goodrich)

The ammonium salt of a high molecular weight polyacrylic acid. This material comes as a 15% total solids water solution which is said to possess excellent clarity and very high purity. It is a very good

* Registered Trade Mark.

thickening agent for natural and synthetic latices. It is not subject to hydrolysis or bacterial degradation.

GOOD-RITE* K-710
(Goodrich)

The sodium salt of a high molecular weight polymer based upon acrylic acid. It is supplied as a clear, colorless, viscous solution that is infinitely dilutable with water and compatible with a wide variety of aqueous dispersions. It is well suited as a thickening agent for natural and synthetic latices. It is not subject to hydrolysis or bacterial degradation.

* Registered Trade Mark.

HALLTEX KRS
(Stein, Hall)

This is a sodium alginate product which is recommended by the manufacturers as a printing thickener for direct, acid, Rapidogen and Indigosol colors. It is a cold water soluble material said to possess a high degree of uniformity and cleanliness. Halltex KRS is further said to furnish excellent color value, sharpness of print, and good rinsibility.

HYDRAZINE
(Mathieson)

Used as a reducing agent and organic intermediate.

HYDROCOP
(Laurel)

An emulsified fatty acid compound said to possess good softening and lubricating qualities. Will form stable emulsions to be applied to cotton and mixed yarns on the winder. May be used alone or in combination with other winding agents. Applied to Orlon staple on the winder, it is said to produce good lubrication and improve the knitting qualities of the yarn.

HYDROXYETHYL STARCH
(Carbide and Carbon)

A white, fine particle solid that is readily soluble in cold water. Viscosity of a 5 per cent aqueous solution, 1500-2500 cps at 20° C. Suggested uses: protective colloid, thickening agent, sizing agent for textiles. Availability: development quantities from pilot plant.

HYGROLA 64
(Colloids)

A yarn conditioner to improve the spinning quality and size take-up of fine worsteds, Orlon, Acrilan, Dynel, Vicara and other new synthetic staple yarns. It is said to replace 1/3 to 1/2 of the normal amount of spinning oil, eliminate static, eliminate lapping, reduce fly, and reduce the oil content while preserving the required lubrication. It is claimed that yarns processed with Hygrola 64 retain their normal moisture which aids in reducing spinning breaks and raises manufacturing efficiency.

HY-PHOS*
Glassy Phosphate
(American Dyewood)

Hy-Phos is being manufactured under U.S. Patent 2,574,047, granted November 6, 1951. Hy-Phos contains 65-67% P_2O_5 and is said to possess the highest sequestering water softening properties over similar types of products. It reacts with the metallic salts in hard water to produce soluble complex compounds, thus eliminating the formation of scale or insoluble soaps. Thus it softens hard water without precipitation. It may be used in textile scouring, boiler water treatment, dish washing, bottle washing, etc.

* Registration applied for.

KEMPLEX
(Burkart-Schier)

An organic sequestering agent for metal ions.

KLEERGEL A
(Colloids)

A high strength, technical gelatin, specially ground and processed for bright, clean finish.

LANAZINE H
(Organic)

An albumen derivative, designed to counteract the detrimental effect of alkalies, acids, oxidizing and reducing agents and chrome salts in the normal processing and re-processing of wool and other animal fibers. Lanazine H processed wool is said to be considerably softer and loftier, have a greater elasticity and a higher tensile strength than wool processed without this product. It is claimed that, because of the improved properties imparted to wool by Lanazine H, greater efficiency in handling and less waste occur in the subsequent operations thru which the fiber has to go—such as carding, spinning, winding, weaving, mending. Dyeing is also said to be improved as shown by more level shades. Lanazine H can be used as well in the stripping bath, protecting the shoddy to such an extent that the usual loss in weight is greatly reduced.

LAURAMINE #25
(Laurel)

Recommended by the manufacturers as a good softener for Dacron, Orlon and similar synthetic fibers. It is stated that it will produce a good hand and reduce static, improving the knitting and weaving qualities of the yarn.

LAURELTEX MP
(Laurel)

A stable compound said to possess good penetrating properties, forming stable solutions with caustic soda. Recommended by the manufacturers for use in mercerizing.

LEKTROSTAT C
(Dexter)

Anti-static agent with cationic characteristics for use on acetate, rayon, nylon and the new synthetic fibers. Lektrostat C resists dry cleaning and washing to a moderate degree. Dissolves readily in hot water and is soluble in neutral, acid and alkaline solutions and is unaffected by hard water. Compatible with resin mixes and with copper after-treatments as well as with starch, dextrines, gums and similar substances as well as with all cationic and many anionic agents under usual processing conditions. Said to combat static electricity during spinning, slashing and weaving and improves cutting and "laying up" properties of finished fabrics. Treated garments have better appearance and resist soiling due to electrostatic attraction of dirt and dust.

LEKTROSTAT GY
(Dexter)

Anti-static agent for acetate, rayon, nylon and the newer synthetic fibers which also produces a soft hand. Soluble in water, neutral and alkaline solutions, it is compatible with gelatin and many other sizes as well as with anionic substances under normal processing conditions. Anti-static effect is semi-durable to washing and dry cleaning and the degree of durability is dependent upon the method of application, fibers to which it is applied and the severity of dry cleaning and washing.

LISSAPOL N
(Arnold, Hoffman)

A nonionic wetting agent and detergent. It is a pale brown syrupy liquid. It is said to be outstanding as a detergent for wool scouring even in hard water. It is free rinsing, although it is often unnecessary to remove residual traces of it out of wool prior to dyeing since it actually is said to assist in obtaining level dyeing. In addition to its use in wool scouring, Lissapol N is a very efficient surface active agent for general textile use.

MACCO STATIC ELIMINATOR
(Mac)

A synthetic wax product, in paste form, that is soluble in water and can be applied as a finish to any synthetic yarns or fabrics made of synthetic yarns without, it is stated, changing the shade or yellowing the bleach. Versene is used in this product to eliminate metal ions.

N-METHYL-N,N-BIS (2-CYANOETHYL) AMINE
(Carbide and Carbon)

$CNC_2H_4N(CH_3)C_2H_4CN$

MW, 137.112; BP, 151°C at 3.5 mm Hg; Sp G, 0.978 at 30°C/20°C; RI (n_D at 30°C), 1.4582; colorless liquid. Chemical properties: Undergoes reactions typical of nitriles and tertiary amines. Suggested uses: Intermediate for the preparation of textile resins and plasticizers. Availability: Research quantities for experimental use.

N-METHYL-N,N-BIS (3-AMINO-PROPYL) AMINE
(Carbide and Carbon)

$NH_2C_3H_6N(CH_3)\ C_3H_6NH_2$

MW, 145.176; BP, 85°C at 2.5 mm Hg; RI (n_D at 30°C), 1.4700; colorless liquid. Chemical properties: Undergoes reactions typical of primary and tertiary amines. Suggested uses: Intermediate for the preparation of textile resins. Availability: Research quantities for experimental use.

MNT SPECIAL (6953)
(Paisley)

A further development of the MNT Concentrate (6917). A catalytic softener. It reacts with any starch to form a thinner flowing, lower viscosity size for better penetration of the twist of cotton warps. Moisture-free, less of it is said to be required than of ordinary softeners.

MONALIT YARN CONDITIONING FLUIDS
(Mona)

Highly concentrated fluids for conditioning cotton, wool, worsted and synthetic yarns and mixtures. They are used to set the twist, replace lost moisture and to add better running characteristics to the yarn for subsequent winding, weaving and knitting operations. They are said to provide strong rust and mildew protection and can be used on all different types of yarn conditioning machines.

MONAMERCE A
(Mona)

A complete series of mercerizing penetrants said to be suitable for a wide range of Baumé or Twaddle degrees according to requirements.

MONAMINE ADO-100
(Mona)

Claimed to be an effective addition to the caustic box of the continuous peroxide bleaching range to eliminate silicate marks.

MONOSLIP NFR
(Mona)

A resin-type, low-foaming, slip-proofing finish for rayon and acetate fabrics which is said to possess excellent resistance to dry-cleaning.

MONATERGE M
(Mona)

A sulfonated fatty acid condensate said to be especially effective for scouring and dyeing of rayon, acetates and other synthetic fibers and is especially recommended by the manufacturers for jig dyeing. When using the product for kier-boiling or boiling-off cotton it is claimed that considerably more brilliant whites are obtained.

MONA WEIGHTER FINISH S
(Mona)

Can be combined with softeners, resins, etc. It is claimed that fabrics remain lustrous and that colors are often brightened, with hand being mellow to crisp according to the amount of finish applied.

MULSOID 713
(Colloids)

An adjusted detergent, specifically designed for cleaning extremely greasy, oily or stained goods. Said to be stable to strong acid or alkaline processing.

MULSOID 717-718-719
(Colloids)

A series of emulsified petroleum solvents said to possess good detergency properties. Suitable as cleansing solvent or boil-off. Good print-washing solvent. Useful as color disperser.

MULSOID 724
(Colloids)

A heavy solvent-base detergent for severe grease, oil or graphite stains. Said to be stable to acid, alkali and high temperatures. Very rapid rinser.

MULSOID 1213
(Colloids)

A concentrated detergent and emulsifier, said to be stable to acids and alkalies, for the economical scouring of worsted, Orlon, nylon and the newer synthetic fiber fabrics.

NEOVADINE A HIGH CONC
(Ciba)

Neovadine A is said to be a very effective auxiliary for the widest variety of applications, such as wool dyeing and printing. It is stated that Neovadine A will strip dyeings without fiber damage, promote levelling, make possible uniform dyeing of wools from different sources and light damaged wool, and also overcome tippy dyeing. In the print works, Neovadine A is said to prevent bleeding of the print color into the ground during washing, and also lead to better white effects in discharge printing of nylon and nylon/wool fabrics.

NEPTON SI
(Crown)

An aqueous dispersion of hydrophobic substances for treatment of all types of fabrics to impart durable water-repellency. May be applied in conjunction with other resin finishes to give multiple fabric properties such as crease resistance, shrinkage stabilization, firmness and body.

NON-SHED 217
(Colloids)

A powdered size wax to be added to, and cooked with, starch to yield a flexible, smooth starch film which will weave with high efficiency; claimed that it will not chafe, nor shed nor tear.

NORANE* 4 STAR A
(Warwick)

A hydrophobic, thermosetting resin-forming compound recommended by the manufacturer for use on rayon and rayon blended fabrics to obtain durable water repellency, durable spot resistance, durable crush resistance and durable dimensional stability. May be used alone or in combination with other resins to obtain durable multiple finish effects. Said to increase wet abrasion and tensile strength of rayon yarns and fabrics.

* Reg. U.S. Pat. Off.

NORANE* 4 STAR GG
(Warwick)

A hydrophobic, thermosetting resin-forming compound used in combination with other resins on rayon and rayon blended fabrics to obtain durable water repellency, durable spot resistance, durable crush resistance and durable dimensional stability. Said to increase wet abrasion and tensile strength of rayon yarns and fabrics.

* Reg. U.S. Pat. Off.

NOVAFOR CW
(Nova)

A whitening agent which is said to give exceptionally fine whites to rayon, acetate and nylon fabrics. It is in liquid form and very simply applied by addition to the bath after scouring and run for 20 minutes at a relatively low temperature (105°F).

NOVAPOL AG
(Nova)

Novapol AG lends itself very well to the dyeing of naphthols in which case it also is said to act as a dispersing agent to improve fastness to crocking and increase to a marked degree the stability of the diazo bath. In addition Novapol AG is claimed to be an excellent dispersing and leveling agent for acetate colors giving clear solutions to most acetate colors in the dyebath, with the exception of black,

of which it also improves the dispersion to a marked extent. The dyestuff is pasted with 2 to 4% of Novapol AG (based on the weight of the dyestuff) and hot water and then is added to the bath previously sharpened with a little Novapol AG. This is said to result in brighter and heavier shades for the full range of acetate colors.

NYANTHROL XL
(Nyanza)

A new product which has, it is stated, been found to be very effective as a levelling agent in the dyeing of tippy and mixed wools. This product is a decided improvement over Nyanthrol LD and the addition of a small quantity of Nyanthrol XL to the dyebath is said to produce solid and uniform shades and also aid greatly in the exhaustion and fixation of the dyestuff. It is suitable for dyeing chrome, acid and milling colors on raw stock, piece goods, yarns and tops.

NYLON CONING OIL A
(Laurel)

A soluble vegetable compound said to possess good softening qualities. Applied to nylon from the coner. Will produce good lubrication and improve the knitting and weaving qualities of the yarn.

ORCOCEYLENE
(Organic)

A complex polyether condensate with a vegetable oil base, essentially neutral, salt-free, nonionic detergent, supplied as a 90% active product. It is readily soluble in all proportions in cold water, less soluble in hot water, soluble in most polar solvents, insoluble in hydrocarbons and chlorinated hydrocarbons, nonirritating, indefinitely stable and nonsubstantive. Concentrations of Orcoceylene for most operations range from 0.05% to 0.15%. It can be used with the usual builders with increased efficiency. Recommended operations where this product can be most effectively used include kier-boiling, open boil-offs, soaping of printed and dyed goods, dye leveling—including package and skein dyeing, continuous bleaching, wool and hosiery scouring and dyeing.

ORCOCIL DISPERSER DK
(Organic)

An alkyl aryl sulfonate containing polyglycol ethers, used as a wetting agent and in particular—a superior dispersing agent for acetate dyestuffs. It is stated that its use with naphthol dyestuffs will greatly reduce crocking. Orcocil Dispenser DK is stable at high temperatures and stable in alkalies and organic and mineral acid solutions. Its addition to a dyebath, as well as its being used in the initial pasting of dyestuff powders, is said to provide for rapid wetting and even penetration of tightly woven fabrics.

OXALIC ACID
(Pfizer)

Oxalic acid is the strongest of the common organic acids. It is particularly useful for the removal of rust spots picked up during processing. Oxalic acid may also be used to advantage by the dyer, It finds use in chrome and alum mordant dyeing and also in the stripping of shoddy. The acid has also been used as a souring agent, and as an ink and dyestain remover in the dry-cleaning industry, because of its bleaching characteristics.

PARAMEL GT
(Arkansas)

Paramel GT is an anionic substantive finishing agent which is applicable to all types of textile fabrics. It is said to impart a very desirable mellow full-bodied hand when used in the range of 1% to 2% in the bath. It may be used advantageously for broadcloth shirtings and cotton underwear materials, where needle cutting on high speed sewing machines must be minimized or eliminated. Its effect on shades and light fastness of dyed fabrics is practically negligible, and when used on dyed cellulose acetate material which has been processed with a gas fading inhibitor, it further improves the resistance to gas fading. Cloth finished with Paramel GT will not develop objectionable odors, and is also extremely resistant to yellowing. Paramel GT is unique in that it is highly compatible with many types of finishing agents, including vegetable gums and resins of various types. In appearance, Paramel GT is a soft white paste having a pH of approximately 8.5. It is best prepared as a pre-mix in four to five times its weight in water at 150/160° F, before adding to the finishing bath.

"PERDOX" SODIUM BORATE PERHYDRATE
(Du Pont)

Sodium borate perhydrate ($NaBO_3.H_2O$) content a minimum of 96%, active oxygen content a minimum of 15.5%. For use in bleaching and oxidation of dyestuffs.

PERMA KLEER-50
(Refined)

An organic sequestering agent of the polyamino carboxylic acid type. It is suitable for deactivating divalent metal ions, such as calcium, magnesium, under alkaline conditions.

PERMA KLEER-53
(Refined)

An organic sequestering agent of the polyamino carboxylic acid type. It is suitable for deactivating ferric ions as well as calcium, magnesium and other divalent metal ions in solutions containing less than 3 per cent caustic alkali. At pH 11, 5 ml of Perma Kleer-53 will deactivate 400 mg $CaCO_3$ and 600 mg ferric ion.

PERMA KLEER-OH
(Refined)

An organic sequestering agent based on the polyamino carboxylic acid structure. It will effectively sequester ferric ions in solutions containing more than 3 per cent caustic alkali. It is also effective for deactivating calcium, magnesium, and other divalent metal ions.

PERMA KLEER-SP
(Refined)

An organic sequestering agent of the polyamino carboxylic acid type. It is effective under conditions where relatively high concentrations of ferric ion are encountered. It will also efficiently deactivate calcium, magnesium and other divalent metal ions. At pH 11, 5 ml of Perma Kleer-SP will deactivate 400 mg $CaCO_3$ and 1200 mg ferric ion.

PERMALENE A-120
(Refined)

A synthetic detergent which is said to show outstanding stability and efficiency over a wide range of textile processing conditions. It is stable to hard water and alkalies. It is employed to advantage in kier boiling, in bleaching, as a scouring agent for cotton, wool and synthetic fibers and fabrics, and as a dispersing agent for dyes.

PERMALENE A-180
(Refined)

A concentrated synthetic detergent developed for all-round performance in scouring, bleaching and dyeing operations. It is said to combine excellent foam and wetting properties with stability toward alkaline and hard water conditions.

PERMALENE AF
(Refined)

A gas-fading inhibtor which is applied in the jig or dye box. It is a self-emulsifiable liquid which is said to provide durable protection against atmospheric fading with a minimum of yellowing and shade change.

PERMA SET 990
(Refined)

A resinous compound which imparts weight, body and stabilization to resin and starch finishes. It helps to retain a crisp hand on exposure to high humidity. It produces a full hand with maximum resiliency. It is possible to set up cross-linkages with low molecular weight urea or melamine-type resins.

PERMALOID 151
(Colloids)

A water-soluble, plasticized synthetic adhesive for warp sizing of dope-dyed acetate yarns; will produce loom finish fabrics, resistant to rain and water spotting; commercially spot-proof, wash- and dry-cleaning-proof.

PERMANENT TYPE—PLASTIC STARCH 7214
(Paisley)

Liquid, synthetic resin having necessary attributes for permanent starching. Is used cold by dilution with water; 1 to 1 for heavy, 1 to 3 water for light, starching. Yields strong, crisp effects imparting longer life span to treated fabrics. Storage life: 1 year in glass containers.

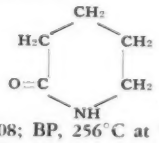
PHENYL MERCURY OLEATE TEXTILE FUNGICIDE
(Nuodex)

Nuodex PMO 10 is a solution in mineral spirits containing 10% mercury as metal and 28% phenyl mercury oleate which reportedly meets the fungicidal requirements of such government specifications as USA-4-1131A (Compound, Textile Preservative for Field Treatment), T-2278 (Mildewproofing of cork products), etc.

Nuodex points out that the high original concentration of the fungicide means that a comparatively small amount is needed to provide the correct active fungicide addition; thus, viscosity is affected less and less extraneous matter is introduced into the formula. Both the active metal and the phenyl mercury oleate content are said to be provided at lowest cost.

Nuodex PMO 10 is readily compatible with organic solvents and is easily incorporated by simple cold mixing, it is stated.

PIPERIDONE-2
(Carbide and Carbon)



MW, 99.08; BP, 256°C at 760 mm Hg; MP, 39-40°C; white crystalline solid. Chemical properties: A cyclic amide which undergoes reactions typical of N-substituted amides, yielding delta-aminovaleric acid or ester on hydrolysis or alcoholysis. Suggested uses: Intermediate for the preparation of resins and dyestuffs. Availability: Research quantities for experimental use.

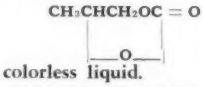
PLASTEX 2
(Colloids)

A vegetable protein finish for imparting strength and hand to nonwoolen fabric bases; to fabrics; and to artificial leather.

PLASTOID 871
(Colloids)

Claimed to be an excellent plasticizer to be added directly to polyvinyl acetate to eliminate sticking to drying cans and to effect a smooth film and finish.

PROPYLENE CARBONATE
(Carbide and Carbon)



Stable, colorless liquid.

MW, 102.09; Sp G, 1.2069 at 20/20°C; BP, 242.1°C at 760 mm Hg; Fr P, —48.8°C, Visc, 2.8 cps at 20°C; RI (n_D at 20°C), 1.4200; Sol in water, 19% by wt at 20°C; Sol of water in, 7% by wt. at 20°C. Completely miscible with acetone, methanol, ethyl ether, benzene, carbon tetrachloride. Chemical properties: Reacts with numerous amines, phenols, alcohols and similar compounds containing an active hydrogen to give betahydroxypropyl derivatives. Suggested uses: Solvent for certain natural and synthetic resins used as the basis of some synthetic fibers. Availability: research quantities.

PROTEAN W
(Protean)

A protective colloid to prevent damage in all types of fibers, especially wool, wool mixtures, yarns, silk, cotton and rayons. In the dyeing of wool it is stated that the increased yields offset the cost of Protean W used. It is further stated that the dyeing time is reduced as much as half, while the shades are level, brilliant and easily controlled. The wool fibers are said to be longer, stronger and more elastic. No change in procedure is necessary; the Protean W is added to processing liquors.

PROTENOL W
(Continental)

A wool assistant for bleaching, dyeing, carbonizing and stripping which is said to save the wool, inhibit harshness, maintain elasticity, level both the bleach and dye and economize on the use of acids, salts and dyeing time.

PRYM* DS
(Warwick)

A modified carbamide resin, 75% active, recommended by the manufacturers for durable stabilization and crushproofing on rayon fabrics, and for durable mechanical finishes such as embossing, glazing and moiré on cotton fabrics. Compatible with other resins, and completely miscible with water in all proportions. Stable to storage and requires no refrigeration.

* Reg U S Pat Off

PURASIST
(Gallowhur)

A micronized form of para-phenylphenol, is said to have proven a valuable assistant in the dyeing of man-made fibers. Purasist can be used directly without the necessity of preparing the sodium salt. Favorable results have been obtained with it in dyeing Dacron staple fabrics on a reel. Purasist in cuprous ion dyebaths has proven satisfactory in the application of acid dyes to Orlon acrylic fiber. Its presence is said to promote more rapid dye absorption and improved wet fastness in dyeing Type 81 Orlon continuous filaments. In the dyeing of Dynel Purasist is used as a swelling agent in the dye bath to assist the penetration of the dyes into the fibre. Many of the acid-type dyes can be successfully used in dyeing Dynel to obtain a wide range of colors, by the use of Purasist to increase the affinity of the acid dyes for the fiber.

QUAKER DIAPENE BF
(Quaker)

Quaker Diapene BF was developed to impart a full and lively hand to synthetic gabardines. In addition to this effect it may be used to build up the body and hand of other fabrics as well. It is stated that acetate satin in particular may be given a full, meaty hand by the use of Quaker Diapene BF. Additionally, Quaker Diapene BF will preserve and enhance the luster of this type of fabric.

QUAKER DIAPENE EV
(Quaker)

It is claimed that this highly versatile thermoplastic copolymer resin may be used to achieve a variety of effects on many different types of fabrics. It has been used as a finish for knit goods, for low-count cotton and nylon fabrics for the achievement of fullness, body, and smoothness. It will produce a noticeably full hand with a small application on sleazy goods. The product may be recommended as a backfilling compound for upholstery fabric. It is compatible with anionic, cationic, and nonionic compounds.

QUAKER DIAPENE VH-8
(Quaker)

A highly compatible thermoplastic resin finish imparting a firm, smooth hand. This product may be used as a total or partial replacement for starch in cotton piece goods finishing formulations and, it is claimed, will increase the fullness, body and resiliency of cotton and spun rayon fabrics. It is stated that, unlike typical resin dispersions, Quaker Diapene VH-8 is compatible with weighters and water repellents, as well as other nonionic, cationic, and anionic materials. The particle size is uniformly sufficiently small to permit rapid interfilament penetration. Although com-

pletely dispersible and applicable when cold, it may be used at temperatures well above room temperature when desired.

QUAKER DIAPENE VS
(Quaker)

This anionic thermoplastic resin finish is said to impart a full, firm, and pliable hand to fabric, without the crisp harshness usually associated with vinyl resin products. Its exceptional clarity is said to make valuable its use as a binder for starch to produce specialized finishes. When used in finishing formulations, it gives a full, mellow hand, and clarity of finish. It is claimed that the use of Quaker Diapene VS on blended goods results in a really outstanding white. In addition to the desirable finish, a considerable savings may be effected by the use of this resin. Because of the internal softness inherent, little or no additional softener may be required in many cases. It is claimed that, unlike other thermoplastic resin finishes, Quaker Diapene VS does not appear to impair the sewability of the fabric.

QUAKER DIAPERM F
(Quaker)

An effective dye fixative for direct dyestuffs. When applied in accordance with recommendations, it is said to give increased fastness to perspiration, water, and laundering.

QUAKER PROSOTEX FI
(Quaker)

Quaker Prosotex FI when applied in accordance with recommendations is said to impart fume fading protection to dyed cellulose acetate fabric through from one to three cycles. This renewable gas fading inhibitor may be applied alone as a single bath or may be used to top a permanent gas fading inhibitor to give additional protection.

QUAKER PROSOTEX FP
(Quaker)

This durable gas fading inhibitor is of particular interest because of its light color. When applied to dyed acetate fabrics, it is said to confer fume fading protection, durable to laundering, dry cleaning and storage.

QUAKER PROSOTEX SD
(Quaker)

A versatile delustrant suitable for use on dark fabrics. It is claimed that the use of this synthetic duller has made possible the successful dulling of a variety of fabrics and fibers, some of which are very difficult to deluster by ordinary means. It is stated that only a small quantity need be applied to achieve satisfactory results. It is readily soluble in cold water and should be applied on the padder at room temperatures. It is not a colored pigment and may be used on dark fabrics without a chalky effect. It is further stated that it also will not show dusting off as does the usual type of duller. Evenness and ease of application are two of the greatest advantages of this new delustrant.

QUAKER VELVETOL ES
(Quaker)

Anionic softener designed for use with concentrated weighter solutions. It may be used satisfactorily in the same bath with high concentrations of weighters and electrolytes. When used in this manner, it will not yellow or subdue shades. Additionally, its surface active nature makes it unnecessary to use a penetrant in the finishing bath.

RAYON CREPE OIL #114
(Dexter)

A water-soluble oil of medium viscosity which produces a stable emulsion for crepe soaking of rayon skeins or cakes in either still tub or machine soaking.

RESILOID 238
(Colloids)

A synthetic-base plasticizer stable to highly acid sizings of the polyacrylic type.

RESIPON RF
(Arkansas)

Resipon RF is offered primarily for use as a stiff finish for ribbons. For maximum results, it is desirable to give the ribbon a heavy calendaring subsequent to impregnation with a solution of this resin. In most cases, it is necessary to use a minimum of 10% on the bath volume for a satisfactory degree of stiffness. This product is also useful as a slip-resistant finish for low count rayon fabrics. In appearance, Resipon RF is a clear viscous liquid practically water white, and readily soluble in warm water. The use of this product with finishes having an acid reaction, such as cationic softeners, must be avoided.

RESIPON TH
(Arkansas)

Resipon TH is a cationic finishing and dulling agent, and is offered particularly for use on nylon hosiery. Nylon hosiery treated with this product, is said to acquire a desirable body and pleasing hand with a slight dulling effect. In most cases, it is recommended that 3% to 5% of Resipon TH be used in the finishing bath based on the weight of the hosiery. In consistency, Resipon TH is a soft white paste which disperses readily at 140°F. It is recommended that a pre-mix be made with a small proportion of hot water with thorough stirring, before addition to the finishing bath.

REXOBOND N-8
(Emkay)

A water-soluble nylon 8 resin said to improve abrasion resistance of various fibers. It is claimed to be an excellent bonding agent.

REXOWET A
(Emkay)

A sulfonated synthetic ester intended for use as a penetrant and wetting agent.

RHONITE*R-2
(Rohm & Haas)

A thermosetting chemical for crisp finishes on nylon, and durable embossing of cotton, nylon and acetate fabrics. Also used to impart shrinkage control to viscose rayon. This product is a water white liquid which is stable under normal conditions of storage and is applied by means of the usual methods and equipment.

* Registered Trade Mark.

RIBBONSET
(Scher)

An alkyd dispersion which air dries to form a tough, hard, glossy film. It has been developed to give a parchment type hand on acetate satins and taffetas for ribbons. When properly applied on the equipment found in the average processing plant it is stated that there will be no mark-off, loss of luster, nor difficulties encountered in subsequent ribbon cutting operations. Ribbonset is compatible with nonionic and anionic materials such as gums, glues, starches, sulfonated oils, and polyvinyl acetate emulsions, thus presenting the finisher with a variety of attainable hand. It is stated that the finishes required for underwear goods, bedspreads, blanket bindings, and ribbons have been successfully obtained with Ribbonset.

RIBBONZENE GLUE 773
(Paisley)

Liquid adhesive. When diluted with water, it forms a clear, colorless, flexible, nontacky, odorless, moisture resistant, cohesive and adhesive film. Also, greaseproof. It prevents fraying of fabric edges. Used at 120-140°F.

RODACRON
(Richmond)

A swelling agent for dyeing Dacron which is said to help in levelling as well as penetration.

RONYL FINISH S-936
(Richmond)

A one shot hosiery finish which is said to be a finish, duller, board lubricant and exhauster combined in one product. It is further said to give a firm, dull finish

without undue stiffness. It is claimed to be quite economical to use.

ROSIN AMINE D PENTACHLOROPHENATE
(Hercules)

The commercial availability of this new industrial fungicide in the form of solution and emulsion condensates was announced on November 17th by Hercules Powder Company after an extensive four-year test program as a preservative for wood, textiles, cordage, felt, paper, and other materials which are susceptible to rot and decay.

This research program has been a co-operative project of Hercules Powder Company and Monsanto Chemical Company. In addition, various governmental and commercial laboratories have participated in the evaluation of Rosin Amine D Pentachlorophenate. Monsanto is reportedly the first licensee under the Hercules patents.

This new product is a reaction product of pentachlorophenol and Rosin Amine D, a primary amine manufactured by Hercules. In effect, Rosin Amine D reportedly enhances the fungicidal properties, decreases the vapor pressure, and makes necessary the use of high-cost auxiliary solvents and other special agents generally required with pentachlorophenol preservatives.

Rosin Amine D Pentachlorophenate, a resinous solid, is said to be readily soluble in a wide range of oils and hydrocarbons and may be readily emulsified. It is used in concentrations of .3 to 1.5 per cent as a fungus preventive for cordage, textiles, paper, and felt. Rosin Amine D Pentachlorophenate also is said to be relatively nonirritating to the skin.

ROSOPEN
(Richmond)

A nonionic wetting agent and penetrant which may be used on any fiber. It is claimed that it requires a much smaller quantity than the usual penetrating agents and that it is impervious to hard, acid, or alkaline waters. It is stated that it has controlled foam and is designed for package dyeing but may be used anywhere.

SCOUR P
(Fancourt)

A product designed to remove oil or soil from heavily oiled nylon full fashion hose, particularly those which have been knit with black chrome dyed heels and toes.

S D #70
(Laurel)

Compound possessing good penetrating and softening qualities. A sulfonated fatty acid ester, forming stable solutions in water. Is said to have good lubricating, wetting and rewetting qualities.

SECCO
(Scher)

Claimed to be an excellent sequestering agent which is stable for long periods of time at high temperatures. The tetrasodium salt of ethylenediamine tetraacetic acid, it is said to be very effective in eliminating troubles in textile processing due to metallic ion contamination. Secco may be used to prevent spotting, dulling, crocking, streaking and shade changes in dyeing. It is stated that bleaching baths are more stable with Secco is employed and detergent action is more efficient.

SELAPON GEL
(Jacques Wolf)

Intended for use for practically every purpose in the processing of textile fibers including dyeing, wetting, bleaching, finishing, etc. It is said to be primarily a powerful detergent, stable to acids, alkalies and hard water. It is stated that it will prevent the formation of lime soap, does not precipitate in the presence of metal salts, is unaffected by bleaching powders, peroxide or hydrochlorite, and does not have any limits as to fibers on which it can be employed including all natural and synthetic fibers. It is further claimed that its use in bleaching, dyeing or finishing of rayons, acetates or nylons is without parallel. In acid milling in the hat industry, as well as in the processing of wool in all stages, its use will result in more satisfactory results, it is reported. Satisfactory results, according to condition of the material to be treated, should be obtained with the use of ½ to 2% of the Selapon Gel based on the weight of the goods.

SILK OIL #42
(Dexter)

A water-soluble oil of medium viscosity for softening silk gum of China and Jap silk preparatory to winding and throwing. Effective on both filament warp silk and thrown crepe silk.

SILK OIL #84
(Dexter)

Water-soluble oil of medium viscosity for softening Duoppioni silk preparatory to winding and throwing.

SILVER LUBE AS
(Carolina)

This product is said to impart a high degree of antistatic qualities to Orlon, nylon, Orlon-wool blends and other man-made fibers. Also provides good lubricity to fiber during subsequent mechanical operations. Applied either emulsion or spray. Applicable to Pacific and French systems.

SILVER LUBE RL
(Carolina)

This resin lubricant, a 50% nonionic microcrystalline wax emulsion, is recommended by the manufacturers for use with urea and melamine formaldehyde resins, polyvinyl coatings and standard gums, starch mixes. Other qualities such as providing lubrication, sewability and permanence of application are said to be particularly adapted to friction and Schreiner calandering before curing.

SODIUM GLUCONATE, TECHNICAL
(Pfizer)

Sodium gluconate is a stable, free-flowing, tan-colored powder. This compound is said to be an excellent sequesterant for many metallic contaminants which interfere with various processes. It is stated that it is the sequesterant of choice for iron in the normal pH ranges and in the presence of free caustic. Sodium gluconate, therefore, is useful as a sequesterant in many processes such as kier boiling, bleaching and dyeing which are susceptible to contamination by trace metals.

SOFTEX S-5
(Fancourt)

A finish and softener used for cotton half hose or nylon full fashion hose with the heels, toes or welts constructed from cotton or silk.

SPINOL NL
(Laurel)

A soluble oil used for preparing emulsions for lubricating Orlon and Dacron staple stock. Applied in emulsion form to the stock prior to spinning. Does not contain hydrocarbons. Will produce good lubrication and is easily removed from the stock in subsequent processing, it is reported.

STAT-NIL 5 (6964-A)
(Paisley)

Antistatic Wick Oil for coning or quilling of acetate, nylon, Orlon and the newer type yarns. May be applied at high or low speeds with the added quality of a lubricant and may be used in fabric finishing of nonabsorptive fibers to yield high speed sewing. May be dispersed in sizing solutions at normal sizing temperatures.

STAT-NIL 8 (6966)
(Paisley)

Emulsifiable, antistatic, all-purpose oil. Forms a translucent solution in hot or cold water. May be used in slashing or finishing formulations with excellent compatibility with a wide variety of sizing materials.

STYMER* LF
(Monsanto)

An improved loom finish size for finish-

ing dope-dyed filament acetate and designed to combat water spotting. An odorless, durable size, Stymer LF is said to perform well from slashes to loom, producing a good-looking nonspotting finished fabric with marketable hand.

* Registered Trade Mark.

SULFONATE 1240
(Colloids)

A sulfonated-base silk oil, fine dispersion in water emulsion, for hard gum silks, such as Douppinioni.

SULFRAMIN L
(Ultra)

A modified alkyl aryl sulfonate especially formulated for textile processing. The following properties are claimed: excellent detergent with unusual foam stability in extremely low concentrations of detergent; acid, alkali and hard water resistance good; soft hand imparted to fabric. The material is slightly substantive to most fibers. It is stated that: Sulframin L is an excellent detergent especially when used with builders; the foam stability is unusually good in the presence of fatty soil; the foam stability is also very good at low concentrations and high temperatures over rather long periods. It is said to work very well in the continuous boil-off and one should be able to run several days before the bath will have to be dumped. Replenishment of the bath as liquor is carried out will, of course, be necessary. Pyro phosphate plus soda ash are recommended as builders. It is claimed that the product will clean the fabric well and leave a soft full hand. It is highly recommended by the manufacturers for use in the dye beck as the boil-off. It is stated that foam on the dyebath will be maintained throughout the whole dyeing and the cloth will have a nice soft hand.

SYNCAP DF
(Crown)

Synthetic cation-active resin for treatment of commercially-dyed cellulosic fabrics to improve water bleeding and perspiration resistance.

SYNCAP GL
(Crown)

Water-soluble thermo-setting resin for treatment of cellulosic fabrics to impart durable calendered effects such as embossing, Schreinering, and glazing.

SYNCAP S
(Crown)

Aqueous solution of modified thermo-setting resins for use in conjunction with Nepton SI to impart durable water repellency.

TALLO-PAISE 16 (6965)
(Paisley)

Another addition to the category of the modern cotton slashing softener. It is moisture-free. It serves as a binder, lubricant, penetrant. It is said to impart softness of hand to woven goods without detracting from film forming strength of any starch with which it is cooked. By itself, it forms a film of high moisture retentive quality.

TAREXALANA
(Organic)

A stabilized emulsion of solvents, used as a paint and tar remover in conjunction with the soaping and cleaning of wool, where, due to its overall dissolving action of substances which normally tend to resist dyestuffs, less trouble in unlevelness is said to be encountered in subsequent dyeing.

TELKANITE M
(Dexter)

Stabilizing agent and assistant for all types of naphthol dyeing and printing. Its high stability and dispersal properties in acid medium are said to make it particularly suitable for the pasting up and dispersal of bases. It promotes clear, stable solutions of bases for long periods. When added to the base of salt solution for naphthol dyeing of piece goods, it will tend to disperse the unfixed color lake. It also is said to promote easier scouring of excess color from fabric and reduces the tendency to crock. Added to a salt or base print, it reduces the tendency of naphthol prints to bleed onto white grounds when soaping. It also promotes the removal of thickener and reduces the mark-off blotches at the nip rolls of the soaper. It is soluble in acid and water, unaffected by diazotizing and does not jell on long standing.

TEXTILE FLOCKING ADHESIVE 788
(Paisley)

Liquid, synthetic resin. Dilution made with cold water. Used by hand brushing, spreader machine or spray gun. Has good resistance to water. Viscosity: 15,000-20,000 cps. Storage life: 3 months.

TRANSGO S
(Fancourt)

A transfer remover for the removal of transfers from nylon or other synthetic fibers.

TRIETHYLENE GLYCOL
(Mathieson)

Fatty acid derivatives of this compound are used as emulsifiers, demulsifiers and lubricants.

TRITON* X-102
(Rohm & Haas)

A nonionic surface-active agent with improved efficiency for kier boiling and continuous boil-off of cotton and rayon fabrics and yarns. Especially effective for penetration and detergency in hot alkaline solutions, it is claimed. Stable to acids, alkalies, and hard water salts.

* Registered Trade Mark.

TUFF-TUFT (6962)
(Paisley)

Highly concentrated, low-moisture adhesive, which may be diluted with tepid water to form a solution for immersion of jute cops used as filling in the weaving of velvet and similar carpet constructions. No heat required in application with complete penetration of fiber in five minutes. It forms a film of rapid re-moistening quality with maximum tack to bind the tuft. Added treatment at time of use will yield high moisture repellency.

ULTRAWET 35KX
(Atlantic Refining)

A slurry containing 31½% of high molecular weight sodium alkyl aryl sulfonate, 3½% sodium sulfate and 65% water. This product is characterized by especially good foaming and detergency properties with a haze point of 90°F. It is used for wool scouring, dye leveling, kiering, penetrating, and in general an excellent dye bath assistant.

ULTRAWET 60L
(Atlantic Refining)

A liquid consisting of 60% solids and 40% water. The active ingredient is an organic alkyl aryl sulfonate. It is claimed that, in addition to having superior foam, detergency, and wetting properties, Ultrawet 60L has a very low haze point, being crystal clear below 20°F. It is said to be extremely effective in package dyeing as a penetrant and leveling agent and in general is an excellent dye bath assistant.

UVITEX* GS
(Ciba)

Uvitex GS is a water-soluble optical bleaching agent. It is recommended by the producers for the production of purer and more brilliant whites on cotton, viscose rayon, linen, hemp fibers and paper. It is similar to Uvitex RS, RBS and RT brands but gives a greenish cast.

* Reg Trade Mark

UVITEX* SI
(Ciba)

Uvitex SI is a water-insoluble optical bleaching agent. It is recommended by the manufacturers as an addition to soaps and detergents to give improved whites, on washing, to fabrics of cellulosic fibers, that is, cotton, viscose rayon, linen and hemp.

* Reg Trade Mark.

#840 VEHICLE FOR WASHABLE GOLD PRINTING
(Anders)

This vehicle is a water-in-oil emulsion. For printing, one gallon should be mixed with two gallons of bronze powder. In order to obtain fastness to hand washing and dry cleaning, it is necessary to heat the printed fabric for 3 minutes at 240°F or higher. For cleaning the engraving while printing, a nylon brush rotating in the opposite direction from the roller is recommended.

VELUBRA HC
(Amalgamated)

A high molecular weight nonionic finish, said to have excellent properties as a lubricant and softener. This product is especially designed for the lubrication of synthetic fiber mixtures to facilitate high-speed sewing. Allows needles to penetrate fabric without overheating and subsequent damage to thread. Easily handled and applied.

VELVAMINE PG
(Refined)

A gas-fading inhibitor which is applied as a finish. It is a concentrated paste which is readily soluble in warm water. It is said to impart protection against atmospheric fading and provide an excellent finish for acetate fabrics.

VELVAMINE PGL
(Refined)

A gas-fading inhibitor which is applied in the finishing bath. It is a water-soluble, clear liquid which is said to give excellent protection against atmospheric fading without appreciable change in the hand of the fabric.

VIBRALON NYLONEX CONC.
(Fancourt)

A finish which imparts increased water absorbency and softness to half hose manufactured from nylon, Vinyon, Dacron or other synthetic fibers.

VINAC XX POLYVINYL ACETATE EMULSION
(Colton)

Vinac XX-Grade Polyvinyl Acetate water emulsion is used as a base for textile finishes and sizes and coatings. This raw, unmodified, polyvinyl acetate emulsion is said to have excellent compounding stability and tolerance for plasticizers, thickeners, solvents and pigments. Films deposited from Vinac XX emulsions are said to be strong, clear and glossy and grease-proof and have excellent resistance to light and oxidation. It is claimed that the high degree of adhesiveness possessed by Polyvinyl Acetate makes it invaluable as a sizing for rayons, and cottons and to impart wrinkle resistant finishes.

VINOL POLYVINYL ALCOHOL GRADES FH-400 & FH-500
(Colton)

Vinol Polyvinyl Alcohol is available in two standard fully hydrolyzed grades: FH-400—Medium Viscosity and FH-500—High Viscosity. Polyvinyl Alcohol solutions deposit clear, strong, transparent and grease-proof finishes and coatings. The non-gelling characteristics of Vinol are said to impart excellent machining and spreading properties to finished formulations. Vinol Polyvinyl Alcohol is used in the textile field as a sizing for nylon, rayon, acetate and cotton.

VINYL BENZOATE
(Carbide and Carbon)

$CH_2 = CHOCOC_6H_5$

Oily Liquid. MW, 148.15; Sp G, 1.0703 at 20/20°C, BP, 172°C at 300 mm Hg; VP, 0.2 mm Hg at 20°C; RI (n_D at 20°C), 1.5266; Visc, 1.8 cps at 20°C; Sol in water, <0.01% by wt at 20°C; Sol of water in, 0.32% by wt at 20°C. Chemical properties: Polymerizes slowly alone and copolymerizes with other ethylenic monomers. Polymers have good water-resistance and have higher softening points than polyvinyl acetates. Polymers are brittle at low temperatures. Suggested uses: Copolymers are useful as coating resins for textiles. Availability: research quantities.

VINYL BUTYRATE
(Carbide and Carbon)

$CH_2 = CHOCOCH_2CH_2CH_3$

MW, 114.14; Sp G, 0.9022 at 20/20°C; BP, 116.5 at 760 mm Hg; Fr P, —86.8°C; RI (n_D at 20°C), 1.4102; VP, 14.5 mm Hg at 20°C; Visc, 0.60 cps at 20°C; Sol in water, 0.30% by wt at 20°C; Sol water in, 0.30% by wt at 20°C; completely miscible with acetone, benzene, ethyl ether, heptane, methanol, carbon tetrachloride. Chemical properties; polymerizes alone and copolymerizes with other ethylenic monomers. Polymers are more water-resistant than polyvinyl acetates, and less brittle at low temperatures. Suggested uses: preparation of coating compounds for textiles. Availability: research quantities.

VINYL-2-ETHYL HEXOATE
(Carbide and Carbon)

$CH_2 = CHOCOCH(C_2H_5)C_4H_9$

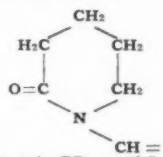
MW, 170.24; Sp G, 0.8751 at 20/20°C; BP, 185.5°C at 760 mm Hg; VP, 0.3 mm Hg at 20°C; RI, (n_D at 20°C) 1.4262; Sol in water, <0.01% by wt at 20°C; Sol water in, 0.20% by wt at 20°C; Visc 1.2 cps at 20°C. Chemical properties: polymerizes alone and copolymerizes with other ethylenic monomers to give polymers that are more water-resistant and less brittle at low temperatures than polyvinyl acetates. Suggested uses: Polymers and copolymers are of interest as coating compounds for textiles. Availability: research quantities.

VINYL FORMATE
(Carbide and Carbon)

$CH_2 = CHOCOH$

Colorless Liquid. MW, 72.06; Sp G, 0.9651 at 20/20°C; BP, 46.6°C at 760 mm Hg; VP, 270 mm Hg at 20°C; RI (n_D at 20°C) 1.3859; Visc, 0.36 cps at 20°C; Sol in water, hydrolyzes at 20°C; completely miscible with acetone, benzene, ethyl ether, heptane, methanol, carbon tetrachloride at 25°C. Chemical properties: Polymerizes readily alone and copolymerizes with other ethylenic monomers. Polyvinyl formates are clear solids, harder than polyvinyl acetates. They are more resistant than polyvinyl acetates to solvents such as gasoline hdrocarbons. Polyvinyl formate is rapidly hydrolyzed by heating with water alone to give polyvinyl alcohol. Suggested uses: preparation of coatings for textiles; preparation of polvinyl alcohol which is widely used as a binder, thickener, stabilizer and sizing material. Availability: research quantities.

N-VINYL PIPERIDONE-2
(Carbide and Carbon)



MW, 125.096; BP, 230°C at 760 mm Hg; MP, 42°C; white crystalline solid. Chemical properties: Undergoes reactions typical of di-substituted amides and compounds containing the vinyl group. Suggested uses: Preparation of textile resins. Availability: Research quantities for experimental use.

VINYL PROPIONATE
(Carbide and Carbon)

$CH_2 = CHOCOCH_2CH_3$

MW, 100.11; Sp G, 0.9173 at 20/20°C; BP, 94.9°C at 760 mm Hg; VP, 35 mm Hg at 20°C; Visc 0.50 cps at 20°C; Sol in water, 0.82% by weight at 20°C; Sol of water in, 0.60% by weight at 20°C; completely miscible at 25°C with acetone, benzene, ethyl ether, heptane, methanol, carbon tetrachloride. Chemical properties: Polymerizes alone, copolymerizes with other ethylenic monomers. In general, polyvinyl propionates are more water-resistant than polyvinyl acetates and are less brittle at low temperatures. Suggested uses: preparation of coatings for textiles. Availability: research quantities.

WARPOL 389
(Colloids)

A waterless oil treatment for Japan or

China raw silk; said to eliminate soaking and drying. Further said to insure a minimum of handling and so a minimum of disturbance to, and matting of, the wind.

WAX EMULSION G
(Laurel)

A stable, soluble paraffin wax compound. Recommended by the manufacturers for use on cotton and mixed fibers. Applied on the winder in emulsion form, or as a softener on yarn and piece goods in the finishing operation.

EQUIPMENT

AIR SLASHER DRYER
(Proctor & Schwartz)

The Proctor air slasher is said to make possible productions up to 1,000 pounds per hour and can be applied with equally good results in drying cotton, wool, spun synthetics and blended fiber yarns.

Features of the new Proctor slasher include:

1) wet splitting of warp at entering end
2) Proctor-patented parallel air flow nozzles which insure mild air action—and at the same time thorough drying
3) direct motor driven fans—eliminating belt or coupling drives
4) use of lint screens and placing of heaters for ready accessibility simplifies cleaning
5) exhaust fan for slasher and size box
6) all steel construction for strength and smooth interior to further aid in easy cleaning.

ALL-PURPOSE CALENDAR
(Tube-Tex)

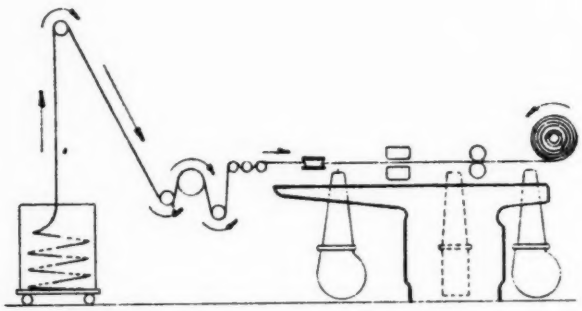
Tubular Textile Machinery Corporation has designed auxiliary attachments for their Tube-Tex Tensionless Calender which now enable mills to use the machine as a regular calender, as a straight stripe finisher, as a shrinkage control machine or as a sweater framing and steaming unit.

The machine is versatile and allows for conversion from one style fabric to another. Micro controls enable the operator to regulate by handwheel the speed of the machine, the amount of relaxation in the fabric and the straightness of stripe or fabric cross line.

The machine employs the patented Tube-Tex dual propeller spreader, a mechanism that conveys the fabric while it is being steamed and calendered. This mechanism is said to be instantly adjustable in widths for circular fabrics from 7" to any spread width desired.

The machine uses controlled steam from jets aimed at both the top and bottom layers of the fabric, thereby providing uniform widths and level moisture regain.

Another feature of this unit is the instantly-adjustable pressure mechanism. By flipping a lever the operator can adjust calender pressure so as to produce a fabric with a firm flat hand or a full, lofty hand. The feature of eliminating the press is particularly useful in the processing of napped or similar heavy weight fabrics. This machine has reportedly proved of particular value to manufacturers of brushed or napped fabrics who have long shied away from the spreading, steaming and pressing of their cloth for fear of losing the nap. By spreading and steaming without mangling, loftiness of fabric is retained, substantial savings result in the cutting operation, and hand racking is eliminated, it is pointed out.



Schematic of Tube-Tex Tensionless Calender

A new approach has been developed for the framing and steaming of transfer type sweater fabrics. Cloth can be handled on this machine in the piece length instead of the individual body sections. The garment separation can then be done at the cutting table prior to garment cutting.

The Calender will successfully treat fabrics constructed of synthetic fibers or blends of synthetic and natural yarns, it is claimed. The principle of relaxation is a basic feature of the Tube-Tex Tensionless Calender.

Physical control of knit goods shrinkage can also be obtained on the Tube-Tex Tensionless Calender, eliminating the need for extra fabric handling.

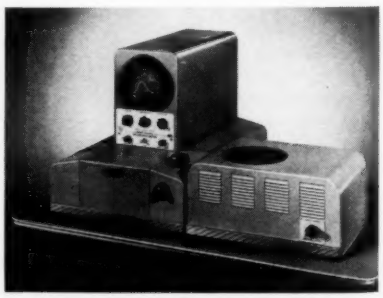
The Tensionless Calender is now equipped with a means for straightening striped fabrics. This is an operation that formerly was performed exclusively on the Tube-Tex Straight Line Calender. The new attachments can be installed on any Tube-Tex Tensionless Calender and permit the straight finishing of striped fabrics in a single pass.

This machine will either roll or fold the fabric.

AO RAPID SCANNING SPECTROPHOTOMETER
(American Optical)

The new AO Rapid Scanning Spectrophotometer is one of the first commercially available kinetic spectrophotometers for the instantaneous display of spectrophotographic curves of various materials through the entire visible range of the spectrum.

It is a unique combination of optical spectrophotometer and electronic indicating device which traces curves at 60 per second on the face of a cathode ray tube against a linear wavelength-percentage



AO Rapid Scanning Spectrophotometer

grid. Transparent materials up to 100 mm in thickness can be accommodated in the instrument's sample chamber, it is stated, and spectrophotometric reflectance curves may be obtained from opaque materials of approximately 1 square inch dimensions by means of a reflection attachment.

Because of its extreme speed the Rapid Scanning Spectrophotometer is adaptable to the study of rapid color changes or for handling a large volume of work. It offers possibilities for monitoring a flowing liquid in which spectral absorption can be used as a criterion for control. A long persistance phosphor on the Cathode Ray Tube permits rapid visual comparison of two or more samples.

For more detailed study or for permanent records, photographs of the tube face can be made with any of the standard 5-inch oscilloscope cameras. As many as 10 curves may be superimposed in one picture together with zero line, 100% line and wavelength standardizing filter reference. Time lapse photographs offer a convenient way of obtaining a permanent record of color changes in sequence.

PIPETTE WASHER BASKET
(Fisher)

This stainless-steel basket supports pipettes for storing, washing, rinsing and transferring, and replaces the previous pipette holder (which was made of light metal bands). Fisher points out that, in the improved model there is no possible chance for pipettes to protrude beyond the sides of the holder to be chipped or broken while being washed. The basket is a slightly tapered cylinder, four inches in diameter at the top. The bottom is heavy mesh screen welded to the cylinder.

The Improved Pipette Washer, also made in the Fisher shops, has a glass cleaning chamber with an integral automatic syphon. It is used for the flushing and rinsing steps; soaking and cleaning are done in a separate jar. The washer occupies one square foot of space and can be set up in a corner of the sink, out of the way of other operations. A hose is connected to the water tap and to a serrated hose connector at the base of the washer.

When the tap is turned on, the water rises in the washer to a height near the top of the chamber; then the automatic syphon empties the chamber. Each cycle takes four minutes.

All parts of the Improved Fisher Pipette washer are made of corrosion-resistant material—glass, stainless steel (18-8) and rubber. It will accommodate pipettes up to 18 inches long; the basket will hold as many as 125 pipettes seven mm in diameter, proportionate quantities of other sizes.

Fisher Pipette Washer Basket

BLACK LIGHT UNIT
(Cooper Hewitt)

With this new and powerful black light unit in the 3660 angstrom range, a quartz high-pressure mercury arc tube in a sealed beam is utilized to furnish the desired wavelength.

Visible light is eliminated by a Corning filter, which transmits only the bands in the region of 3660 angstroms.

The Cooper Hewitt 3600 Black Light unit can be supplied for flood or spot focus and the swivel arm allows settings and adjustments of the lamp in practically all directions and positions, it is claimed.

The Cooper Hewitt 3660 Black Light unit is valuable for revealing faults in raw materials and processed work, distinguishing types of fabrics, detecting faults in dyeing, matching lingerie shades, examining weakening of shade in washing of dyed textiles and revealing oil stains.

Cooper Hewitt 3660 Black Light Unit

CENTRAL SUPPLY STILL
(Barnstead)

The Barnstead Type "Q" pyrogen-removing water still has been combined with a handy 12 gallon Pyrex tank in a compact wall mounting arrangement. Reported capacity: 10 gallons of high purity distilled water per hour. Unions used in mounting the unit can be easily loosened, making for speedy installation, it is stated. Designed for the smallest wall space possible, the Central Supply Still is now in full production.

COLD WATER YARN CONDITIONING MACHINE
(Mona)

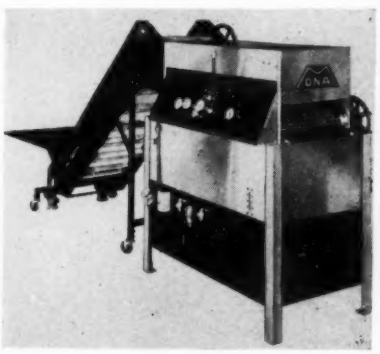
The Monalit-Duplex, a new streamlined cold water yarn conditioning and twist-setting machine finds increasing application for yarn on bobbins, quills, cones and other large packages.

For conditioning of bobbins and quills the yarn is fed into the machine by a conventional hopper and feeder conveyor unit. For cones and large packages, the mobile feeding unit is rolled aside so that the operator can feed the packages into the unit by hand.

The Monalit-Duplex is of stainless steel construction. All sides are enclosed with operating controls on the outside. The conventional wooden conditioning aprons have been replaced by stainless steel mesh conveyors, which permit spraying from both top and bottom. The machine is also said to be "drip-proof".

To facilitate servicing and cleaning, the unit is of a three-section light weight construction. The mobile feeding unit can be rolled aside, whereas the entire top section can be lifted off the lower tank and drive section for periodic cleaning of the tank and conditioning conveyor.

Sizes conform with individual mills' production requirements.



Monalit-Duplex Conditioner

COLOR MATCHING SKYLIGHTS
(Macbeth)

These artificial daylight lamps are designed to produce a high intensity of artificial North sky daylight, enabling the color matcher and shader to match critical colors over the entire textile color range. The new units announced by Macbeth are the Model BX848 and BX1014. The BX848 is recommended for dyehouse color matching, and the BX1014, for color shading where artificial daylight illumination for larger areas is required. Both produce the new high intensity artificial daylight.

COLOREDE*
(Instrument Development)

This colorimetric instrument, designed for fully automatic control based on light measurement, is a highly sensitive, reliable light-comparator built around a photomultiplier, a flicker photometer optical system and an electronic system proven in Color-Eye. The instrument is designed to operate continuously for thousands of hours without zero or sensitivity shift. It may be utilized for the measurement and control of any quantity which can be represented as a change in color or light, it is claimed. Operating as a direct signal device the instrument will reportedly provide up to 1.0 volt d c for as little as plus or minus 1% scale relative brightness difference between standard and measured quantity. Output voltage may be utilized to drive recorder, control device or servo.

* Registered Trade Mark

CON-O-MATIC WASHER
(Proctor & Schwartz)

Shown for the first time at the Southern Textile Exposition in Greenville, S C, was this new type slack washer known as "Con-o-matic." It is said to offer many advantages over conventional slack washers.

It is stated that self-compensating rollers keep an even amount of fabric in each tank, without any effort or attention on the part of the operator, while through the use of tapered squeeze rolls (patent applied for) tanks are kept filled with fabric to the desired level, thus insuring tension-free operation.

There is said to be considerably less maintenance than with conventional slack washers in that there are no elaborate drives to give the synchronization desired. In addition the Proctor "Con-o-matic" requires less floor space than conventional equipment.

The basic principle used in this equipment makes it adaptable for use as a saturator, in a dye process, or wherever fabrics are to be processed in liquid.

CONTINUOUS BLEACH FOR TUBULAR KNITS
(Proctor & Schwartz)

Another recent innovation to come out of Proctor & Schwartz, Inc development work is this continuous conveyor type bleaching range for tubular knit fabrics.

With this new Proctor equipment tubular knit fabric is carried through the steaming unit by means of a continuous conveyor.

The range is said to offer the ultimate in bleaching efficiency for the average size mill. It is designed for productions of approximately 1,000 pounds per hour.

The Proctor Con-o-matic tensionless washer is used in this range as a saturator and final washer. Tapered rolls (patent applied for) operate without tension to keep each tank filled with fabric to the desired level.

Through the use of the conveyor principle in the steamer and the Proctor Con-o-matic principle in the saturator and final washer an excellent bleach is obtained with the least possible tension exerted on the material, the company states.

DE-STAT CLOTH AND PLASTIC BATH
(Globe)

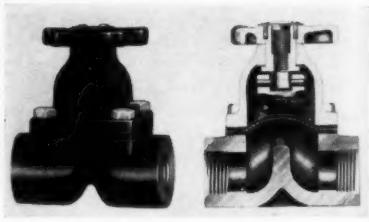
The purpose of De-Stat Cloth is to remove, by simple wiping, all static charges and prevent their recurrence.

Because the use of such a cloth is limited in the textile industry, Globe Laboratories has developed a solution called Plastic Bath which reportedly will remove static charges from synthetic textile yarns and fabrics. Plastic Bath is available in one gallon containers.

Numerous tests reportedly have proven Plastic Bath effective in the processing of yarn. It is said to prevent "flying" caused by friction built-up static charges. It has been incorporated in the sizing solution for treating warps, prior to the weaving operation, thereby minimizing much of the flying, snarling and breaking in the dropwires and heddles. Treatment of filling prior to winding on bobbins has reportedly reduced static-caused flying, snarling and breaking in the shuttle, and its path, in the actual weaving operation.

Dyers of synthetic fabrics have also found Plastic Bath helpful in the handling of these fabrics during the dyeing and finishing operations, it is stated.

In many cases the inherent static charge causes fabric to stick to the body and build up to the point where it gives a shock to the wearer. Such garments, when dipped in Plastic Bath solution will lose their static electricity attraction and remain free of any charge whatsoever for several ordinary washings in soap or detergent, it is claimed. The treatment (dip, lightly squeeze and dry without rinsing) has also been found to be effective on silk and wool.



AHR Diaphragm Valves

DIAPHRAGM VALVES
(American Hard Rubber)

Combining the corrosion resistance of Ace Parian with the Saunders diaphragm principle, these new general-purpose diaphragm valves are said to be ideal for handling a wide variety of corrosive chemicals.

Metal does not come in contact with the liquids handled. The valve body is molded of Ace Parian, a plastic compound in the polyethylene family. The diaphragm may be rubber, neoprene, or polyethylene, as required. The bonnet assembly is sealed off from the solution, and the valve has no stuffing box. It can be serviced without removing from the line, and all parts are interchangeable, it is stated.

The new valves are available in standard sizes from ½" to 2", threaded for standard pipe threads. Working pressure is 50 lbs per sq in at 77° F.

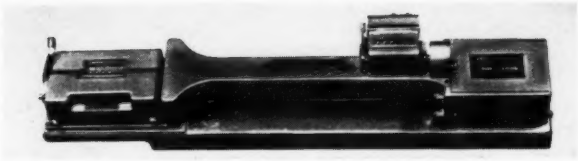
Used in conjunction with the recently-announced line of Ace Parian and Saran pipe and fittings, these new valves make possible protected fluid systems of corrosion-resistant Ace Plastics. The valves are also available with bodies molded of Ace Saran.

DOUBLE UNIT MEASURING MACHINES
(Trumeter)

Two innovations in the Trumeter Company's line of measuring machines have been introduced.

One of the machines has added a predetermined counter for signals to the operator to stop his machine when pieces are divided in equal lengths.

A second new Trumeter has been developed for use in dyehouses, finishing plants, etc. In order to measure each piece being processed, two counters are fitted together. An internal clutch brings one counter into operation while the other remains still. When the sewed joining of the fabric goes through the counters are



Trumeter Measuring Machine

switched, giving continuous measurement. While the reading of the previous piece is being made the second counter is already in operation.

DYEHOUSE SHOE
(Stahmer)

An improved design of the Stahmer dyehouse wooden-soled shoe is said to give the worker greater comfort and exceptional protection in wet processing departments.

Stahmer's dyehouse shoes have a 1½ inch thick close-grain sanded maple sole that protects the worker's feet. For comfort and ease in walking the sole is shaped to fit the foot and covered with a soft cushion inner lining. Stahmer's patented copper wire process securely fastens the sole to the heavy leather tops. Double stitching and rivets at the points of strain reinforce the sturdy uppers. A pearl gray suede gusset or tongue keeps out dust, dirt and liquids.

The Stahmer dyehouse shoe is said to wear longer than leather, is less costly than leather and can't be damaged by water, chemicals or acids. The shoe also is an aid in preventing many foot diseases, staining and poisoning.

The shoes are available in sizes 5 to 12. Larger sizes available on special order.

Stahmer Dyehouse Shoe

FILTER PUMPS
(Sethco)

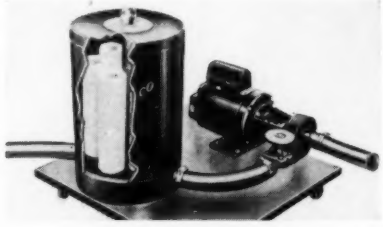
Models ASI-400 and ASI-600, the newest additions to Sethco's line of filtering equipment, are designed and constructed to produce filtration of practically any acid or alkaline solution from pH 1 to pH 14. These filter pump units are extremely simple and economical to operate, the manufacturer states.

The ASI series consists of two models —Model ASI-400 rated at 400-500 gallons per hour and Model ASI-600 rated at 600-850 gallons per hour.

Materials of construction of pump and all fittings are stainless steel type 316. Material of construction of the filter assembly is a recently-developed synthetic resin, "Sethrin", which is said to possess extreme chemical inertness and excellent temperature resistance. Sethrin is reportedly resistant to sulfuric acid up to concentrations of *50%*, to nitric acid up to *25%*, to hydrochloric acid in all concentrations, to sodium hydroxide up to *50%* and to ammonium hydroxide up to *50%*. There is no organic solvent in common use which will attack this resin at room temperature, it is stated. Sethrin itself is a thermosetting resin and is said to be resistant to heat distortion up to 220° F.

Models ASI-400 and ASI-600 are equipped with volute type centrifugal pumps and completely enclosed ball bearing induction motors for heavy duty industrial applications.

All models are mounted on heavy polished bakelite panels with ball bearing rubber covered casters for easy portability. Each unit comes equipped with 12 foot lengths of chemical inlet and outlet hose.



Sethco Filter Pump

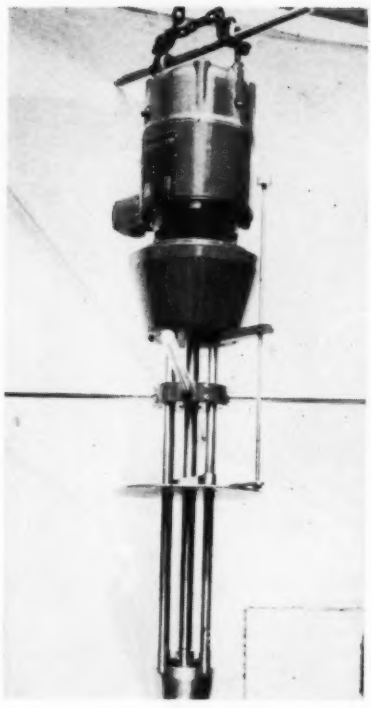
JET MIXERS
(Barrenco)

Barrenco Jets are designed to wet mix and efficiently disperse solids and liquids into liquid vehicles, reducing particle size uniformly below 50 microns. They are high speed mixers with peripheral velocities ranging up thru 100 ft/sec in the larger production models. A complete range of mixers are available from ¼ and ½ HP units for laboratory and pilot plant operation to larger units up thru 20 HP.

An interchangeability feature is incorporated into the design of all the jets, which break down easily and simply into the component parts making it possible to clean thoroughly between batches and colors. The cost for repairs and maintenance is reportedly reduced to a minimum since interchangeable parts per the operator to service his own machin

Rotor sizes are at least twice those of any other comparable wet mixer operating in the peripheral velocity range of 50-100 ft/sec, and in terms of horsepower input, it is stated that the jet will handle up to five times the volume of the nearest competitive mixer.

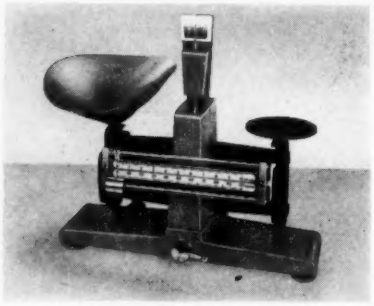
The jets are said to be excellent for handling textile inks, whether the O/W



(Above): Barrenco Jet Mixer Production Unit
(Below): Assembled Unit

or W/O preparations. They serve not only to disperse agglomerates of pigments and/or dyes but also act as an efficient homogenizer in the preparation of the gum and casein solutions and for the emulsification of the oil and water phases. The jets are portable mixers permitting operation over the mouth of a drum, or mixing container without vibration, vortex, surface boil and incorporation of air, it is stated.

The features in the jet as outlined by Barrenco include 3-piece rotors, completely interchangeable and replaceable mixing head assemblies, shafts, bearings and motors; rotor peripheral velocities in excess of 75 ft/sec; portability and vibration-free operation; ability to handle mixes in viscosities up to 30,000 centipoise in large batches and the ability to wet mix, disperse and homogenize all at the same time.



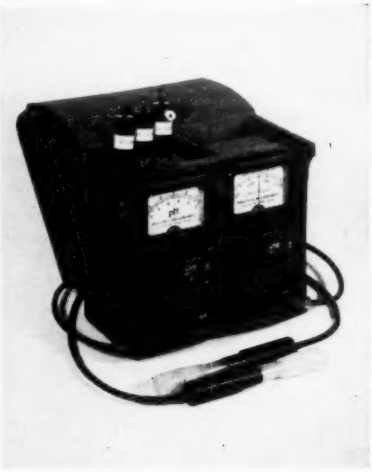
Torsion Laboratory Balance

LABORATORY BALANCES
(Torsion)

The Torsion Balance Company has introduced a new line of laboratory balances styled by Carl Otto, winner of the 1951 Industrial Designers Award. Constructed on the torsion principle, these laboratory balances are not susceptible to the inaccuracies caused by dust and dirt, as are the knife-edge fulcrum balances. A new oil dash pot that reportedly cuts weighing time to 1/5 of that formerly required is featured. In addition, a wide range of graduated beams has been designed for ease of reading and speedy operation. The slide weights on the graduated beams will not cock and introduce errors, it is claimed. The Balances are finished in a smooth, chemical-resistant, baked enamel and all metal parts have been made as corrosion-resistant as possible, according to TBC.

Wear and the resulting inaccuracies in weighing have been practically eliminated by the use of the torsion principle, it is stated, for this principle more closely approximates a theoretically perfect fulcrum than any other method. The entire weighing mechanism is virtually one piece with no loose parts to cause faulty operation. Thus, with reasonable care, the initial high accuracy of the Torsion Balance remains constant for its life.

The Balances are available with round pans, flat pans or scoops. Provisions for taring containers up to 16 ounces on balances with 4½ kilogram capacity and up to 8 ounces on balances with a 2 kilogram capacity have been made.



Leuco Potential Meter

LEUCO POTENTIAL METER
(Analytical Measurements)

The electrode of this new portable duplex unit, which measures both the pH and leuco potential, can be inserted into any vat dyebath to determine whether the bath is within the proper range. The Meter is standardized against a self-contained standard cell and reads from 700-1000 millivolts. The standardization point can be adjusted to another point on the meter to read values above 1000 millivolts.

The "Leuco Potential Meter" comes separately or in a handy case combined with the "Analytical Pocket Size pH Meter." It can be readily moved from bath to bath for readings or may be mounted near one bath and the electrodes installed for continuous readings and operation.

The Meter's battery operation eliminates permanent electrical wiring, it is pointed out, and its readily available hearing-aid type batteries are said to provide 1300 hours of operation.

LOOP DRYER-CURER
(Proctor & Schwartz)

A thoroughly re-designed loop dryer-curer for drying of spun rayons, silk piece goods, toweling, terry cloth and similar fabrics and curing resin impregnated fabrics.

This newly designed Proctor loop dryer utilizes an entirely new concept in air movement which is said to result in:

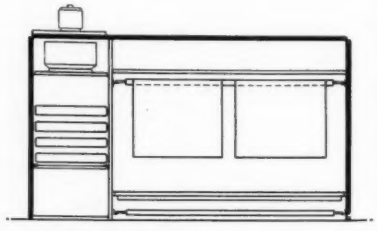
1) Maximum production with minimum power requirements
2) Even drying for an extremely wide variety of fabrics
3) Circulating air that is readily adjustable to suit drying conditions

The proper application of lint screens and readily accessible heater coils reportedly reduces cleaning time to an absolute minimum.

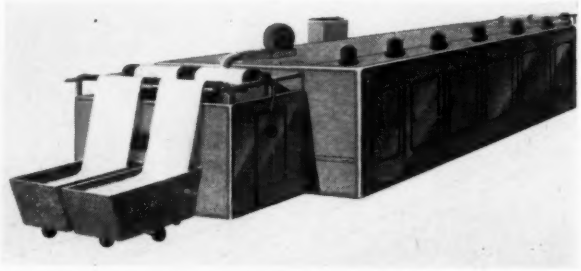
Direct motor driven fans eliminate expensive maintenance of couplings and belts, so long a problem with many loop dryers.

An entirely new type panel construction, developed by Proctor engineers, is used for the housing. This panel construction results in a smooth, sleek appearance, since the interior is free of unnecessary structural members, promotes greater cleanliness inside the dryer.

The design of the new Proctor Loop Dryer-Curer has been standardized for shorter delivery. Where necessary the standard design is adapted to meet individual plant requirements.



Cross Section—Proctor Loop Dryer-Curer



Proctor Loop Dryer-Curer

Mona Moisture Meter

MOISTURE METER
(Mona)

A recent development is the Mona Moisture Meter, an electronic, portable instrument for measuring the moisture content in fibers, sliver, roving, yarn and fabric during all phases of production. It reportedly measures accurately and immediately, within a tolerance of .5%.

Suitable to all types fibers, the instrument is said to be sufficiently rugged to withstand routine abuse in the mill. Standard dry cell batteries are used to avoid variations in line voltage.

Weight: 4 lbs. Measurements 7½" x 5¼" x 3-1/3".

MONO-COLUMN DEMINERALIZER
(Penfield)

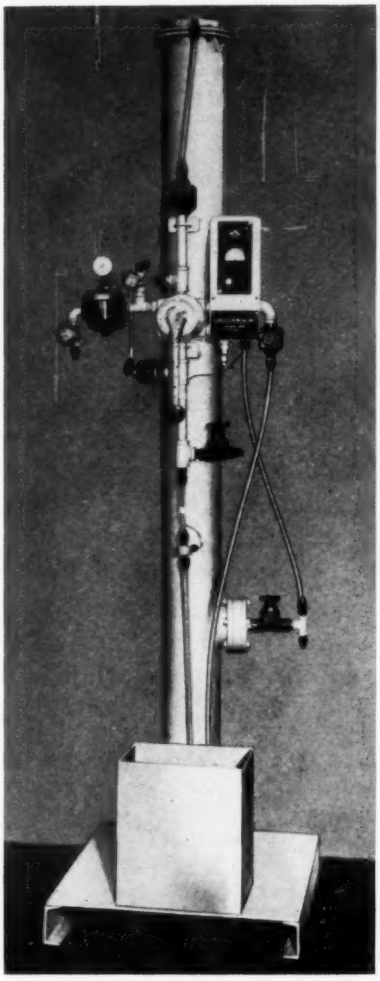
A recent addition to Penfield's line of industrial demineralizing equipment is this M-100 Mono-Column Demineralizer with a capacity of 4500 grains. It is designed for users of up to 100 GHP of super high purity water.

The unit is exceptionally compact, requiring for its installation 2' x 2' x 7'6" of floor space, connection of influent to a plant's water system, and connection of effluent to those points where high purity water is required (process, boiler feed, etc).

Raw water enters the demineralizing unit at the influent and after passing once through the mono-column of mixed cation and anion resins, is received at the effluent stripped of its impurities. A flow meter on the influent enables the user to control the water intake for the most efficient ion exchange action and an electric purity meter provides continuous indication of the purity of the demineralized water being received at the effluent.

Operating costs are said to average $.15 to $.30 per 1000 gallons for mineral-free water the equivalent to triple-distilled.

When purity of the effluent falls below the desired standard, indicating the need for regeneration of the resins, such is accomplished in a single operation consuming under an hour of time by means of a regeneration system that is an integral part of the demineralizing unit.



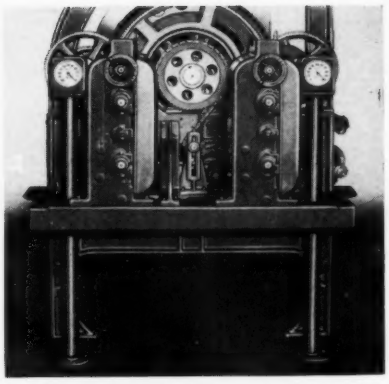
M-100 Mono-Column Demineralizer

The effluent lines carrying the demineralized water to desired points-of-use are plastic as are all the lines and valves dealing with corrosive regeneratives. The unit's central control valve is acid-resisting bronze and all influent and distribution piping is red brass. In addition, this new model Penfield Demineralizer features a "visual window" design which allows the removal of the unit's central distribution system without emptying the column of its resins.

NAPPING ENERGY INDICATORS
(Gessner)

A new method of indicating energy on both Gessner Double and Single Acting Nappers.

Gessner Energy Indicators are said to give a constant and continuous indication of energy as the napper is being operated. Any change in this energy force is instantly observed. The fact that this energy indication can be tabulated for future references is particularly important any time it is necessary to duplicate previously napped finishes.



Gessner Napping Energy Indicator

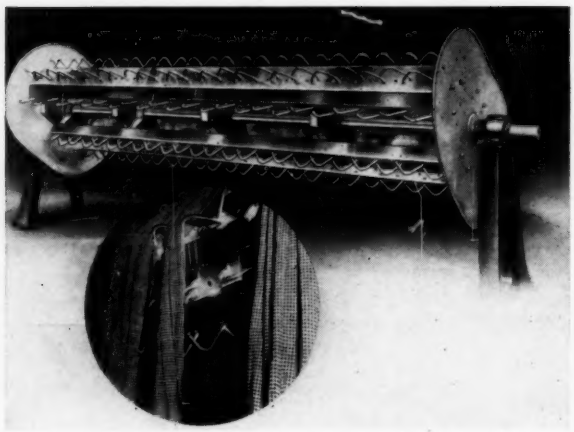
These new indicators, now included on all new Gessner Nappers, can also be installed on existing Gessner Nappers depending upon the model.

NO/LAP REEL
(Hunter)

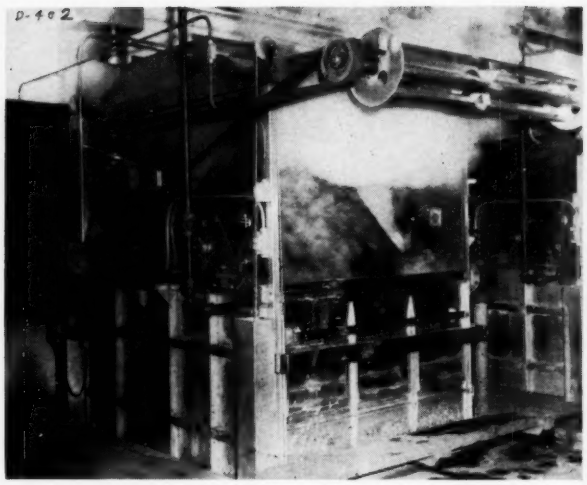
By eliminating the need of covering a dye reel with foreign material to provide traction, the No/Lap Reel is said to be saving users considerable money in labor, lapping materials and idle Dye Beck time. The basic feature of this reel is the arrangement of inverted V-bars, which give a gentle but firm gripping action to each strand of cloth. Two rows of these bars are adjustable, so that goods can be wrapped continuously in one strand and may be raised or lowered to give proper tension to each strand. The No/Lap Reel may be ordered separately for installation in any make dye beck and also comes as standard equipment in the Hunter Model "A" dye beck. (See illustration on next page.)

OPEN WIDTH DYE KETTLE
(Hunter)

The Hunter Open Width Dye Kettle was developed for dyeing pile fabrics and other face-finished goods open width, plus lighter weight goods in rope form. The features of this machine are its versatility and economy as effected through increased production and lower labor costs. The main feature is a unique, triangular reel with three tilting bars for supporting the goods. Supported at their centers by a swivel mounting, these tilting bars automatically keep the cloth centered on the reel. Troubles with slippage



Hunter No/Lap Reel



Hunter Open-Width Dye Kettle

and shaggy backs on the goods are reported lessened. Since the machine can double as a washer after the dyeing operation, extra handling is eliminated.

PIN BOARD CONDITIONING MACHINE
(Mona)

The Monalit Pin Board Conditioning Machine was designed to apply a fine mist of conditioning chemicals to the yarn for the purpose of setting the twist and eliminating sloughing-off in crepe and other high-twist filament yarns. The steaming operation has been eliminated in the great majority of cases. Improved weaving efficiency and a marked decrease in seconds has reportedly been achieved by this process.

Mona Pin Board Conditioning Machine

POCKET MEASURING MICROSCOPE
(National Instrument)

Optometer tradenames this new 50-power, pocket measuring microscope. An engraved scale mounted in the body tube is said to read directly to 0.002 inch. Estimations can be made to 0.0005 inch. Precisions, achromatic lenses, corrected for color and spherical aberration, result in a sharp image up to the very edge of the field of vision, it is claimed. This tool is about the size of a fountain pen and may be carried in the pocket.

In the textile industry, the weave and twist may be examined, individual fibers measured. Fabric finishes, markings, lusters and dry transfers can be inspected for penetration and quality. Faults in weaving and dyeing and damage in materials may be detected.

To use, the Optometer is placed on the surface of the part to be inspected and a light directed obliquely toward the tapered opening. The focusing knob is moved back and forth until the object is in focus. The linear dimension is read on the graduated scale.

The Optometer is priced at $19.50 complete with leather carrying case.

Pocket Measuring Microscope

PORTABLE pH METER
(Photovolt)

This new portable pH meter (Photovolt's model 125) is powered by 3 ordinary radio batteries, reportedly giving 2000 hours service. The unit, which sells complete with batteries and electrodes for $145, is said to possess the following additional advantages:

Precision and Accuracy — 5½" scale length, 1 mm per 0.1 pH division, readable to 0.02 pH. Reproducible and accurate to 0.03 pH.

Single-Range Dial—Readings from 0 to 14 on single scale, continuous through neutral point . . . without switching . . . without pointer reversal.

Instantaneous Reading—No warm-up. Rapid direct readings by dead-beat pointer action . . . without turning of knobs.

Conveniently Portable—Self-contained, compact, rugged . . . for laboratory, plant, and field use, including grounded tanks. Carrying frame available to hold instrument, beaker, buffer, and wash bottle.

Utmost in Simplicity — Single setting, stable readings, no drift. Step-by-step instructions on engraved front panel. 0-100°C temperature control.

pH and Titration — Millivolt scales: —400 to +400; also —800 to +800 for use with external voltage divider. All metal electrodes available.

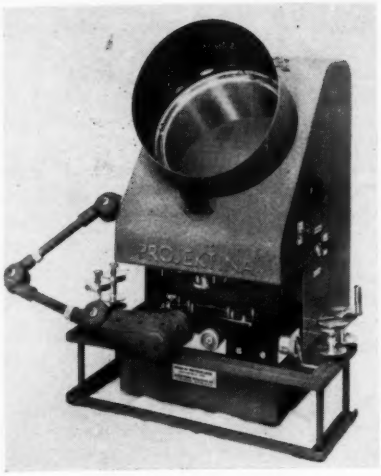
Shielded Electrode — Furnished with fully shielded glass electrode, adaptable for electrodes of any description.

Continuous 8-Hour Operation—Battery life 2000 hours or a year even at full-time daily use. Battery voltage automatically checked and conveniently adjusted without opening instrument.

Minimum of Maintenance—Only 3 batteries, inexpensive ordinary radio types, available anywhere. Electronic tubes: subminiature type, enclosed in one single plug-in unit.

Alternative AC Operation — Stabilized power supply unit available for alternative operation from 100-125 volt AC without batteries.

A carrying frame for the instrument, beaker, buffer and wash bottle is also available.



Sjöström Projectina

PROJECTINA
(Sjöström)

Projectina is a new Swiss optical instrument for counting the number of threads per inch and for testing, measuring and observing fabrics, yarns, fibers and samples.

This unit, standing 24" high with a 12" square base and weighing 40 lbs, is equipped with a series of flood lamps, lenses, mirrors, etc. The object to be observed is placed on a stage-plate which can be adjusted forward, backward, sideways or tilted. It is then blown up on an 8" diameter ground glass screen from 3 to 20 times. The Projectina is so arranged that samples can be observed on the surface, or in transparency or in a combination of both, giving a 3 dimensional view in natural colors.

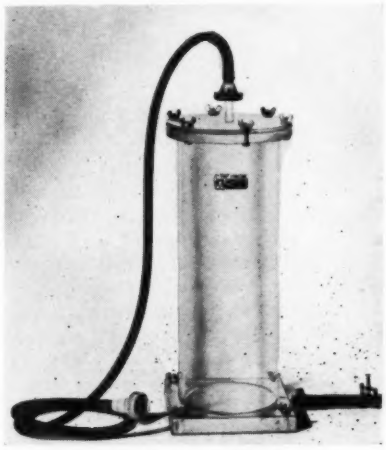
Finely spaced lines on the screen permit actual measurements of fibers, yarns or threads, in either fractions of an inch or in millimeters. The ground glass screen is instantly removable and replaced with an eye-piece disc which reportedly allows magnifications of 50, 100 or 400 times with no further focusing or adjustments.

"PUP" REACTOR
(Enley)

The Enley "Pup" Reactor may be described as a liquid-conditioning machine for servicing the ion-exchange field, plus the removal of solid and gaseous media. The "Pup" (Plastic Unit Process) is the basic unit of a modular system, creating flexibility of design and production.

The "Pup" is an innovation in plant and laboratory equipment, sturdily constructed throughout of high-temperature "Lucite" acrylic resin. It is said to offer excellent chemical resistance plus clarity.

Used for Ion-Exchange, including water



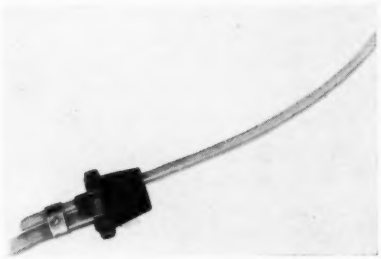
(Above): "Pup" Demineralizer
(Below): "Pup" Reactor

demineralization, the "Pup" Reactor is designed to be used individually or in multiples for simple or complex processes. Because of the design flexibility, it can be used as a pilot model prior to em arking on full scale production, Enley points out. It also provides, for the first time, a low-cost water Demineralizer which may be regenerated by the user.

As a companion to the Reactor, Enley has introduced the "Pup" Regenerator Tube. It is used by simply attaching it to the "Pup" Reactor, and allows for backwashing of resins.

Enley describes the system as "fluid" for the "Pup" Reactors are available in two sizes and 3 heights, and reportedly can be used individually or in series up to a capacity of 12,000 gallons.

To emphasize versatility plus low cost, Enley states that the "Pup" can be provided with high purity, high capacity Rohm and Haas resins for every Ion-Exchange need. One unit, including the resins for use as a water demineralizer (and which may be regenerated by the user), is priced at $49.95. All units have glass wool at the top and bottom, and outlets of ½ inch or more tubing. They may be secured on floor, table or other surface by use of accessories provided by the manufacturer. The top lid is removable so that the Regenerator Tube may be fastened on for immediate regeneration.



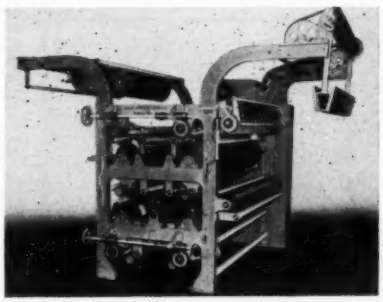
GS Pouring Spout

SAFETY AIR VENT POURING SPOUT
(General Scientific)

The GS safety air vent pouring spout reportedly fits any size carboy and assures a smooth, even flow of acid without spurts or splashes.

The unit is made of an acid-resistant rubber and plastic tubing for longer life. The spout has a reported capacity of 5 gallons per minute.

Pumping or siphoning is eliminated. Fits any size carboy. Price: $4.95.



Gessner Four Cylinder Steam Brush

STEAM BRUSH
(Gessner)

This new four cylinder Steam Brush has been designed especially for fabrics which must be cleared out and softened.

The two 16" brushing cylinders, clothed with nylon bristles, and the two front brushes with a combination of nylon bristles and sandpaper slats are accurately balanced to withstand high speed. Positive, fully encased, chain drive on these cylinders is said to eliminate both belt slapping and all slippage.

Centralized lubrication greatly reduces maintenance time of this all ball-bearing Steam Brush, it is reported. Dust collectors are installed under each of the brushing cylinders including the spiral, nylon bristle back brush. With the steam

pot located overhead, no steam blows on the machine.

Automatic brakes are said to completely halt coasting. A variable speed drive, from 35 to 80 yards per minute, which is optional equipment, plus independently adjustable contact rolls facilitate brush adjustments according to different brushing requirements. By noting the indicator readings on these contact adjusters, certain brushing and sanding effects can be duplicated at any time.

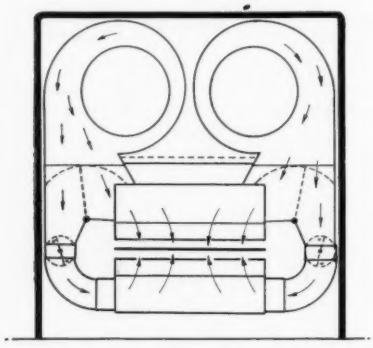
TENTER HOUSING
(Proctor & Schwartz)

This new housing features a completely redesigned heating and fan system which, the company claims, makes possible the greatest efficiency ever offered in a tenter housing. The most important single advance is the use of two fans in each penthouse, making possible maximum air movement and reportedly resulting in the greatest drying capacity per foot of length ever offered in any tenter housing. As a replacement for out-of-date equipment this new Proctor tenter housing will, in many cases, increase finishing department output 50 to 100%, it is claimed. Air circulation is adjustable to suit individual conditions.

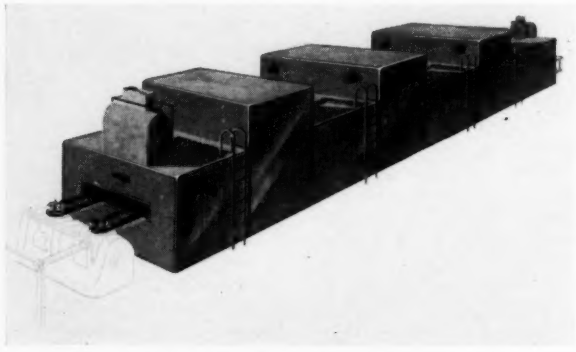
The design provides for complete accessibility to the interior of the housing.

Proctor engineers have developed a new type panel construction, which is said to result in a smooth, sleek appearance, and, since the interior is free of unnecessary structural members to increase the cleanliness inside the housing.

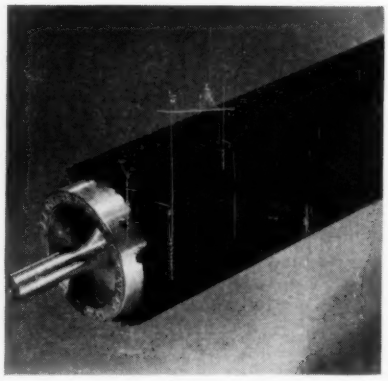
The design of the new Proctor Tenter Housing has been standardized for shorter delivery. Where necessary the standard design is adapted to meet individual plant requirements.



Cross Section—Proctor Tenter Housing



Proctor Tenter Housing



Jenkins Tiny-Tuft Metlkor Brush

TINY-TUFT METLKOR BRUSH
(Jenkins)

A new style of brush, especially designed for textile color furnishing where shallow engraving or low viscosity colors are used, has been developed by Jenkins' engineering department.

This new Tiny-tuft Metlkor, with all the construction features of the standard Jenkins' Metlkor brushes, also embodies those advantages of Metlkor tufted nonbleed construction which permit ease of cleaning and quick change of colors, it is reported. In addition, the Du Pont nylon tufts are smaller and more closely spaced, effecting an over-all distribution of the bristle, yet retaining the tufted pattern sufficiently to permit quick cleaning.

Tiny-tuft Metlkor minimizes splattering; shallow and intricate engravings are thoroughly cleansed of lint and other matter; color is evenly applied and distributed, and every bristle in every tuft is radical to the core to give uniform density and firmness, it is claimed.

Jenkins' points out that present furnisher installations can be refilled with this new design and, like all their Metlkor brushes, tiny-tuft Metlkors are refillable. Their bristles are set in solvent-proof plastic cement and do not shed or break off, it is claimed.

TOTE BOX
(Stewart Parker)

The manufacturer states that stacking is no longer a problem with this new "Custom Built" tote box. A saddle bracket one inch from the top, and the ½" tapered sides and ends enable each box to slide into position.

Other features of the box include a triple fold top perimeter for increased durability, spot-welded handles folded under the top rim for safety, and folded ends. The S-P-3 box in the standard line is painted infra-red to the customer's order.

ULTRA-VIOLET SOURCE
(Ultra-Violet)

The new Blak-Ray ultra-violet source is designed specifically for industrial fluorescent inspection, processing, and packing operations.

The principle of fluorescent inspection is based on the fact that many substances, when activated by ultra-violet energy, emit a visible glow (fluorescence). Observation of the color, intensity, and area of this fluorescence enables the observer to make accurate qualitative and quantitative determination of materials and objects being inspected. Many substances which are not normally fluorescent can be made so by the addition of fluorescent phosphors or dyes which are invisible in ordinary light.

Fluorescent inspection is proving valuable in a number of vastly different fields. In textiles, it is useful for the detection of flaws and dye variations and for observation of "invisible" code and number markings on fabrics and other materials.

The new industrial-type Blak-Ray Model XXX-40 is said to cover an area of 20 to 40 square feet with intense (noninjurious) long wave ultra-violet radiation. The fixture is dust-proof and vapor-proof, with a spectral-finish aluminum reflector for maximum ultra-violet intensity, it is stated. Three 40-watt tubes are used which are made of a new self-filtering glass which reportedly increases the fluorescent response to the point where inspection operations can be handled in a normally lighted area.

(Concluded on page 858)

HIGHLIGHTS OF THE PAST YEAR

P J WOOD

Technical Director, Royce Chemical Co

FIBERS

SILK——In "Highlights" of a year ago, a report of the International Silk Congress held in London, arrived too late to be reviewed in that article. The Congress was attended by representatives from 23 different countries showing that many people are still interested in the "Queen of Fibers". It was stated that the Japanese target of silk production was 40 million pounds of raw silk by 1955, which compares with 21.7 million pounds produced in 1949 and 95.1 million pounds in 1938. At one time about 80% of Japanese silk was made into hosiery, but even though some may still be used for high-priced ladies' hosiery, the possibility of silk recapturing that enormous trade is apparently lost forever to the man-made fibers. However, it should be possible to recreate quite a sizable silk business provided some way can be found to avoid the extreme fluctuations in the price of the raw product. Another factor which should receive the earnest consideration of the International Silk Congress is the matter of the elimination or the strict limitation of metallic weighting of silk goods.

MAN-MADE FIBERS——The recent report of the President's Materials Policy Commission states that the consumption of fibers per person per year in the United States is 39 lbs divided as follows: 20.2 lbs cotton, 16.6 lbs man-made fibers of all types and 2.2 lbs wool. The report goes on to speculate that there will be a large increase in the manufacture of the wholly synthetic fibers, as distinguished from that of rayon, which is expected to almost double by 1975, provided the increase in population of our country continues at the present rate.

The newest entry in the wholly synthetic fiber field is Allied Dye & Chemical Company, which, we understand, has plans to manufacture the equivalent of Perlon, a fiber based on caprolactam. Proposed production is 20 million pounds.

PRELIMINARY PROCESSES

A new method of heat stabilizing nylon is revealed in a patent granted to Cadgene (U S Pat 2,563,394) in which the goods are passed in open width through a bath of molten metal. Oxidizing of the surface is said to be prevented by covering it with a layer of a reducing gas (e g, carbon monoxide).

A southern mill has produced what is said to be the first terry cloth stabilized to shrink less than 1% in washing.

A nationally known textile concern is producing, under license of the Swiss patentee, a thrown nylon that will stretch in such a way that men's stockings can be made in only three sizes to cover all the various conventional sizes in which they are now knitted. This company has also developed the first nylon crepe fabrics ever made in the United States. It is said that the fabrics have the pebble surface of a true crepe, according to a statement of the president of that company.

Continuous scouring of woolens, worsted and mixed fiber fabrics is said to be facilitated by a new type of machine consisting of identical units, the number of which can be varied to suit any particular requirement of the cloth to be treated. Judging from the illustrations we have seen, the individual units appear to be a cross between a dye kettle and a dolly washer. It is claimed that the units can be run in series without tension or tangling and that considerable economy of operation is possible in time, material and labor.

The application of an electronic moisture recording apparatus on synthetic yarn slashers is said to increase production by as much as 15%.

DYEING

As much as two years ago we reported a growing interest in high temperature dyeing processes. As far as apparatus dyeing of yarn in package is concerned, the adaptation of existing machinery to this newer technique did not appear too difficult. As has been pointed out by several workers in this particular field, one of the problems has been the determination of the suitability of the dyestuffs that have been commonly used in low pressure work for the high temperature application. This is being gradually resolved through cooperation between the dyers and the dyestuff manufacturers. Many interesting articles have been published in the *American Dyestuff Reporter* both as reports of the *Proceedings* of the American Association of Textile Chemists and Colorists and as contributed articles from workers on these problems in this and in other countries.

It is likely that the dyeing of loose stock is being carried out on similar forms of pressure apparatus.

The dyeing of piece goods under pressure offers more difficulties, although it was reported two years ago that a pressure machine for dyeing woolen goods was being successfully used by a New England manufacturer. The advent of many wholly synthetic fibers, some of which are not dyed readily by the conventional methods, has drawn attention again to this matter of high temperature dyeing. Experimental work has shown that it is possible to attain greater adsorption of dyestuff at the higher temperatures together with much more level dyeing and very much better penetration.

The hot oil method of dyeing has been successfully used to get these desirable results, in some cases. This is accomplished on a modified form of the Williams unit, adapted to higher temperatures and pressures.

In other cases it was found that an entirely new form of machine is necessary and this led to the invention by Du Pont engineers and chemists of the so-called "Barotor" machine in which the goods are loaded in open width on an apparatus faintly reminiscent of the old black-dye silk reel used for mordanting and dyeing silk crepe de chine some fifty years and more ago, with the exception that the black-dye reel was used at normal temperature and pressure, being only partly submerged in a semicircular dye tub in which the reel was rotated. Black dyeing of silk crepe on such a machine was an all-day job, whereas the dyeing of even the most difficult of the new synthetic fibers on this new type of machine is said

to be possible in very short periods. Take "Orlon" acrylic fiber, for instance, which is most difficult to dye; using the copper ion technique it appears to be possible to carry out the dyeing in one hour at a pressure of 15 lbs, i e, about 250°F.

The matter of loading and unloading the machine seems to have been extremely well thought out, according to a description given at a recent lecture before the AATCC's New York Section. An ingenious device for sampling during the dyeing operation makes it possible to withdraw the sample without losing pressure or temperature.

A new machine for dyeing ribbons and other narrow fabrics, invented by an English manufacturer, is said to give uniform dyeing throughout the batch on long runs and economical handling of short quantities. It appears to consist of a series of padders of unusual design in which the goods are passed through what the inventor describes as "turbulence cells". He claims that the successful use of the machine depends on accurate control of temperature and concentration of the dye solution. All types of colors can be used on this machine, more or less of the units being used according to the number of operations (i e, dyeing, washing, oxidizing, washing, etc) required for the particular type of dyestuff.

The newest type of piece dyeing machine of which we have any record is the Bond Dyeing Machine, the invention of a past chairman of one of our AATCC sections. This is an extreme departure from the usual type of piece dyeing machine, reel, jigger or padder. It has short pressure plates which are perforated, through which the dyestuff or other chemical solutions are applied to the fabric running between the upper and lower pressure plates. Temperature and pressure of the liquor are controllable, likewise the pressure of the draw rolls that carry the goods through each of the units of the machine. According to the inventor, very low liquor-to-goods ratios can be employed and all types of dyestuffs are applicable using from 2 to 6 units according to the number of operations required for the particular type of dyestuff. The time of operation is reduced to a minimum thereby giving economy of time, labor and steam. It is said to be particularly useful for dyeing vat colors by the flash reduction method. The inventor claims that it can also be efficiently used for application of waterproofing, fireproofing, and resin finishes.

In line with the developments for high-temperature dyeing of yarn and piece goods as described above, a machine for high-temperature dyeing hosiery made from these same fibers is now being manufactured by a Southern textile-dyeing-machine maker. It is of the rotary type but has an enclosed cylinder in which the necessary pressure and temperature can be generated and is available in sizes to handle 50, 100 and 200 lbs of hose.

PRINTING

A new type of automatic screen printing machine consists of an arrangement whereby the goods are pasted onto a traveling plastic belt, which passes over the printing table, along which are placed, at suitable intervals, motor-driven devices for automatically raising and lowering the printing screens. These are provided with squeegees which can be set to give a variable number of strokes from 0 to 7. At the end of the printing operation, the goods are automatically removed from the belt and passed through a drying chamber, at the end which they are plaited down. It is said to be possible for one operator to run this machine by a system of remote control. The belt is washed and dried between each printing operation. Fourteen motors, ranging from 0.3-3 HP, run the various parts of the machine. This is an Italian invention.

An ingenious method of roller printing fabrics in a stretched condition is described in British Patent 661,855 (J Dungler, Basle, Switzerland). The unit consists of a series of single color printing machines situated over and under a tenter frame so that the printing rollers are above and the drums below the plane of the goods toward the entering end of the tenter; the after part carries the fabric through a drying chamber, after which it is either plaited down or rolled up.

The color is supplied by a reservoir above each printing roller. According to the description, it would seem that there would be an unprinetd margin on each side of the goods, where the selvages are held in the clips.

The printing rollers are said to be adjustable, vertically and horizontally, as in the conventional roller printing machine.

The printing units (single-color printing machine), which can be set at any distance from one another, are supported on rollers running on rails below the tenter frame.

This device should prove suitable for printing knit goods, which have a ten-dency to curl at the edges, if the lengthwise shrinkage between the individual printing units can be controlled.

Announcement of a new gadget for mechanical filing of doctor blades for the roller printing machine indicates a very handy portable machine for getting up doctor blades. This is an improvement over the old style machine of this sort, which required that the doctor be brought to it for treatment. This machine appears to be inexpensive enough that it should be possible to provide one on each printer's bench.

The advantages of a device of this type are apparent. The grinding wheel, which takes the place of the hand file, is a truncated cone, and is fitted with means to vary the angle of bevel at will and the depth of cut is also adjustable. In addition the depth of cut can be adjusted while the machine is running so that the blade can be crowned to suit the idea of the printer.

Use of such a machine should remove one more variable in the difficult job of machine printing.

In recent publications proposals have been made regarding the use of radio active tracer technique in various textile applications. One of the most interesting of these is the employment of this technique in checking the carry-over of color from one color box to another in roller printing. Work that has been done in this direction indicates that it may be possible to devize special instruments that will indicate promptly when modification of colors is taking place in the different color boxes of the printing machine, from which it is only a short step to provide means of removing adulterated color and supplying fresh color, an operation which is now done somewhat ineffectually by visual and manual means, or at the cost of much waste of color.

FINISHING

From an announcement in the public press we learn that one of the pioneer concerns in the control of dimensional stability in this country is working with two English companies that have been active in this work in the field of wool and wool blends. It is reported that they will be ready to issue licenses for the use of this process as soon as they have completed pilot plant work now in progress.

TESTING METHODS

Evidence of the attention being paid the work of the AATCC by our friends overseas continues to come in. There follows an abstract of an article by H Arnold in *Melliand Textilberichte* as it appeared in the *Journal of the Society of Dyers and Colourists:*

"The more important methods available for testing the water-repellency of raincoating fabrics are surveyed, and an American method *(AATCC Yearbook,* 261 (1942), in which the weighed dry material is immersed in water, squeezed, after sandwiching between filter papers, through a mangle, and reweighed, is recommended for wide use on account of the simplicity of the apparatus required and the relative consistency of the results. Data obtained by this method are given in illustration of the reproducibility of the results."

Proceedings of the

American Association of Textile Chemists and Colorists

Copyright, 1952, American Association of Textile Chemists and Colorists

Editor of Proceedings: Carl Z Draves, 30 Lahey St, New Hyde Park, N Y

December 8, 1952

CALENDAR

AATCC

COUNCIL

Jan 16, 1953; April 17, 1953; June 5, 1953.

GENERAL RESEARCH COMMITTEE

(See Council dates)

NATIONAL CONVENTIONS

September 17-19, 1953 (Hotel Conrad Hilton, Chicago); 1954 (Atlanta, Ga); Sept 21-23, 1955 (Chalfonte-Haddon Hall, Atlantic City, N J).

HUDSON-MOHAWK SECTION

February 6, March 20, May 8 (Albany); June 19 (Outing).

MID-WEST SECTION

February 14 (Hotel Bismarck, Chicago, Ill); April 18 (Netherland Plaza, Cincinnati, O); June 20 (Outing, Lake Delavan, Wis); November 7, 1953 (Hotel Bismarck).

NEW YORK SECTION

January 30, February 27 (Hotel Statler, New York, N Y); April 17, May 22 (Swiss Chalet).

PHILADELPHIA SECTION

Jan 16 (Kugler's Restaurant).

WASHINGTON SECTION

Jan 9 (Washington, D C)—Organizational Meeting.

WESTERN NEW ENGLAND SECTION

Dec 12 (Rapp's Restaurant, Shelton, Conn).

OTHER EVENTS

AMERICAN ASSOCIATION OF TEXTILE TECHNOLOGISTS

2nd Annual Symposium, Feb 3, Hotel Statler, New York.

AMERICAN SOCIETY FOR TESTING MATERIALS

1953 Annual Meeting, June 29-July 3, Chalfonte-Haddon Hall, Atlantic City, N J.

AMERICAN TEXTILE MACHINERY ASSOCIATION

Exhibit of American Textile Machinery, April 26-May 1, 1954, Atlantic City Exhibition Hall. Atlantic City, N J.

CANADIAN ASSOCIATION OF TEXTILE COLOURISTS AND CHEMISTS (Quebec Section)

Dec 13, Jan 17, Feb 21, Mar 21 (Physical Science Centre, McGill Univ, Montreal, Que); April 17-18 (Annual Meeting, Mount Royal Hotel, Montreal, Que); June 20 (Annual Golf Tournament).

GLYCERINE PRODUCERS' ASSOCIATION

Convention, Jan 27, 1953

NATIONAL ASSOCIATION OF HOSIERY MANUFACTURERS

41st Knitting Arts Exhibition, April 27-May 1, 1953, Atlantic City Auditorium, Atlantic City, N J.

NATIONAL COTTON COUNCIL

4th Annual Cotton Research Clinic, Feb 18-20, Oglethorpe Hotel, Savannah, Ga.

NEW YORK BOARD OF TRADE (DCAT)

27th Annual Drug, Chemical and Allied Trades Dinner, March 5 (1953), Waldorf-Astoria, New York, N Y.

SYNTHETIC ORGANIC CHEMICAL MANUFACTURERS ASSOCIATION OF THE UNITED STATES

Jan 14, Feb 11, March 11—all at the Hotel Commodore, New York; June 11-13 (Joint Outing with Manufacturing Chemists' Association at The Greenbrier, White Sulfur Springs, W Va.

EMPLOYMENT REGISTER

This column is open for two insertions per year, per member, without charge. Blanks can be obtained from, and filed with, the Secretary of the Association, Lowell Textile Institute, Lowell, Mass. It is understood that these will be open to inspection by prospective employers who can obtain further information from the Secretary.

52-34

Education: B S, textile chemistry and dyeing.

Experience: Textile Chemist.

Age: 25; married; references; position as asst dyer or finisher, or in quality control work, desired.

11-24, 12-8

52-42

Education: B S in Textile Engineering, specializing in Design and Styling.

Experience: Textile Technologist, fabric development.

Age: 28; married; veteran; references; vicinity of New York City preferred.

52-69

Education: Textile Manufacturing at New Bedford Textile Institute, with course in Textile Testing and Microscopy at M I T.

Experience: Lieut, U S N, inspection and textile development; manager and designer.

Age: 46; married; references; North Atlantic coast preferred.

WNE Meeting Notice

DR HAROLD W STIEGLER, Director of Research of AATCC, will be the speaker at the December 12, 1952 meeting of the Western New England Section to be held at Rapp's Restaurant, Shelton, Conn. His topic will be "AATCC Research Projects and Policies". He will discuss the highlights of research committee activities, our place in the international standardization picture and recent developments in AATCC regarding flammability, rapid control tests, wash fastness, dry cleaning, shrinkage, etc. He will also discuss and demonstrate the Accelerotor, the final model of which is now available, and its application to testing abrasion, color loss due to mechanical laundering, wool shrinkage, fulling, dry cleaning, durability of finishes, multifiber fabric studies, and numerous rapid control determinations. Dinner will precede the meeting and reservations may be made with Socrates Vaniotis, Ciba Company, Inc, 627 Greenwich Street, New York 14, N Y.

W G Knerr

(Mr Knerr is author of the article "Outlooks and Trends in the Hosiery Industry," which appeared on page P736 of the November 10th issue)

Report of the Pacific Southwest Section Outing

October 4, 1952
Ojai Valley Inn, Ojai, California

THE Fourth Annual Outing of the Pacific Southwest Section was held at the Ojai Valley Inn, Ojai, California, on October 4, 1952 and was attended by thirty-four members and guests. ROBERT MISHELL, Dyemasters Inc, was chairman of the outing and was assisted by A H ROBERTS, Jacques Wolf & Co and F HASELHORST, Maher Color and Chemical Company.

Following a luncheon held in the patio, the following chairmen took charge of the activities indicated:

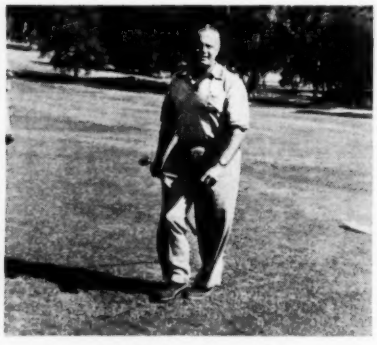
H SOLOMON, United Piece Dye Works, *Golf;* H SMITH, Standard Dyers, *Putting;* B SMOCK, *Ladies Activities;* S SPRINGER, Springer Co., *Ping Pong;* R HENDRICKS, Burlington Mills, *Swimming;* N BURRUS, Burlington Mills, *Riding.*

A cocktail party preceded dinner, which was followed by a short business meeting at which several committees were appointed. The following participants in

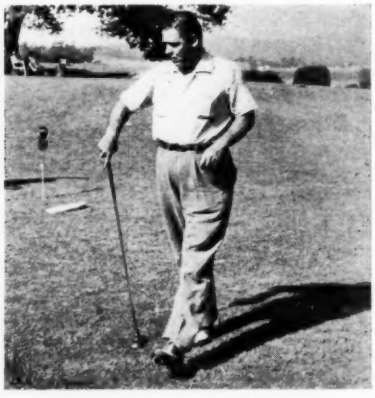
Mrs R C Roth, Mrs A H Roberts

H B Smith, Standard Dyers

A H Roberts, Jacques Wolf & Co



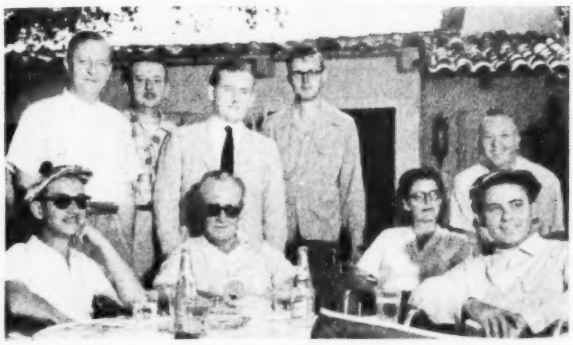
R G Butler, Dyecraft



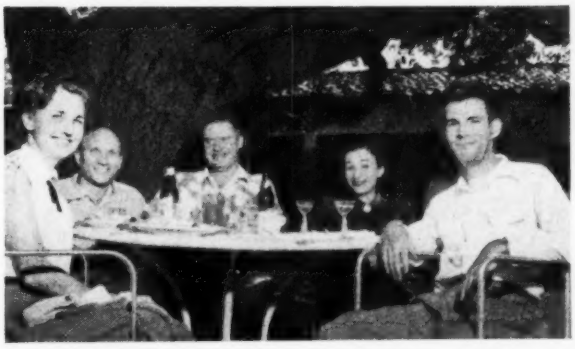
R C Roth, Hess, Goldsmith

(L to r); J R Nehmens, Du Pont; C Fieldhouse, Ciba; A Armitage, North American; S Springer, Springer Co

(L to r): H B Smith, Standard Dyers; J Smith, Dye Masters; R Mishell, Dye Masters; D F Driscoll, Sandoz.



Standing (l to r): E Linquist, H Salmon, W Wigglesworth, T Smock, F Haselhorst.
Seated (l to r): H Smith, D Driscoll, B Smock, J Smith.



(L to r): N Roth, J De La Barre, R Roth, A Donyes, C Donyes.

the day's activities were awarded trophies:

GOLF:

Low gross—R ROTH, Hess, Goldsmith
Low net—R MISHELL, Dyemasters, Inc
Highest score—J De La BARRE, Sandoz
Putting—R ROTH, Hess, Goldsmith
Nearest to pin—R BUTLER, Dyecraft Corp
Ladies putting—L ROBERTS

SWIMMING:

A H ROBERTS, Jacques Wolf & Co

PING PONG:

Men—T SMOCK, General Dyestuff
Ladies—B SMOCK

Prizes were made available through the generosity of mill and supplier friends.

ANGUS H ROBERTS, *Secretary*

Membership Applications

SENIOR

John A Baillie—Colorist, U S Finishing Co, Norwich, Conn. Sponsors: G F Walz, S S Hockridge.

Ralph H Darsey, Jr—Asst to the General Mgr, Lowell Bleachery South, Griffin, Ga. Sponsors: W B Griffin, T H McCamy.

George E Fogle, Jr—General Manager, Lowell Bleachery South, Griffin, Ga. Sponsors: W B Griffin, T H McCamy.

Helge Holter—Dyehouse Manager, Haldens Bomuldsspinderi & Vaveri, Halden, Norway. Sponsors: O M Lea, S Rotevatn.

Bruno C Kotyla—Color Matcher, Marland Mills, M T Stevens Co, Andover, Mass. Sponsors: C A Everett, C L Howarth.

George C Perkins—President, Perkins Soap Co, Springfield, Mass. Sponsors: J S Whitney, R C Born.

Joseph L Quinn—Colorist, Southbridge Finishing Co, Southbridge, Mass. Sponsors: J G Falcon, R G Mullin.

Gayle Rogers—Salesman, American Aniline Products, Inc, Charlotte, N C. Sponsors: J H Orr, R H Nuttall.

Bernard W Rottschaefer—Manager, Process Development Dept, General Aniline Works—Div of General Aniline & Film Corp, Rensselaer, N Y. Sponsors: A E Herrmann, J C Moessinger.

Andre J Thevenon—Foreman Dyer, Natona Mills, Dallas, Pa. Sponsors: I Teplitz, D V Speese.

JUNIOR

Arnold H Gruber—Chemical Engineer, American Cyanamid Co, Stamford, Conn. Sponsors: W J van Loo, Jr, A S Nyquist.

Billy B Moss—Chief Chemist, Burlington Mills Corp, Cramerton Div, Cramerton, N C. Sponsors: R P Anthony, D H Kennemur, Jr.

John T Taylor—Sales Trainee, Rohm & Haas Chemical Co, Philadelphia, Pa. Sponsors: A C Nuessle, W C Lindsly.

ASSOCIATE

Raymond Jacobs—Asst Dyer, Natona Mills, Dallas, Pa.

Milton C McDonald—Chemist in charge of Main Laboratory, A C Lawrence Leather Co, Peabody, Mass.

Richard M Young—Salesman, Ultra Chemical Works, Paterson, N J.

STUDENTS

Vasco G Camacho—New Bedford Textile Institute. Sponsor: F Tripp.

George J Cavicchi—New Bedford Textile Institute. Sponsor: F Tripp.

Raymond A Chartier—New Bedford Textile Institute. Sponsor: F Tripp.

Robert A Cyr—New Bedford Textile Institute. Sponsor: F Tripp.

Gerald R Escolas—New Bedford Textile Institute. Sponsor: F Tripp.

John W Gates—New Bedford Textile Institute. Sponsor: F Tripp.

Albert E Gifford—New Bedford Textile Institute. Sponsor: F Tripp.

Robert M Grime—New Bedford Textile Institute. Sponsor: F Tripp.

Richard T Hunt—New Bedford Textile Institute. Sponsor: F Tripp.

Armond F Lewis—New Bedford Textile Institute. Sponsor: F Tripp.

Donald I Pierce, Jr—New Bedford Textile Institute. Sponsor: F Tripp.

James H Siddall, Jr—New Bedford Textile Institute. Sponsor: F Tripp.

John L Silva—New Bedford Textile Institute. Sponsor: F Tripp.

Henry R Hamilton—Lowell Textile Institute. Sponsor: E E Fickett.

John L Nicalek—Lowell Textile Institute. Sponsor: E E Fickett.

Andre J Pelletier—Lowell Textile Institute. Sponsor: E E Fickett.

Thomas S Quealy—Lowell Textile Institute. Sponsor: E E Fickett.

Charles P Riley, Jr—Lowell Textile Institute. Sponsor: E E Fickett.

John H Scaringi—Lowell Textile Institute. Sponsor: E E Fickett.

Charles A Smith—Lowell Textile Institute. Sponsor: E E Fickett.

David F Torchia—Lowell Textile Institute. Sponsor: E E Fickett.

Atalay Eren—Philadelphia Textile Institute. Sponsor: W H Hughes.

Walter H Foster, Jr—Philadelphia Textile Institute. Sponsor: W H Hughes.

Norman T Rassie—Philadelphia Textile Institute. Sponsor: W H Hughes.

Hugh E Sutphin—North Carolina State College. Sponsor: H A Rutherford.

APPLICATION FOR TRANSFER TO SENIOR MEMBERSHIP

Youel G Hilsman, Jr
Charles R Kuhn
Harry L Mercer
Richard E Nickerson
Robert N Pennie
Robert G Perriello
Dwight L Turner

CORPORATE

General Rayon Silk Dyeing Corp
Berkshire Color & Chemical Co

Philadelphia and South Central Sections

SOME PRACTICAL PROCEDURES FOR DYEING COTTON AND FOR THE HIGH-TEMPERATURE DYEING OF SYNTHETIC FIBERS*

ALEXANDER P ROY

Supt of Dyeing and Finishing
American & Efird Mills, Inc, Lawrenceburg, Ky

INTRODUCTION

I SHALL talk briefly about the application of dyes on cotton in package machines, but more particularly I shall discuss practical procedures for the application of dyes on the synthetic fibers nylon, "Dacron" polyester fiber, and "Orlon" acrylic fiber.

DYEING COTTON

First let us discuss some problems that pertain to package-dyeing heavy shades on cotton knitting yarn and sewing threads. Sometimes the color has a tendency to crock or sublime because of excessive dye or improper methods of application. My reason for choosing this particular problem is that inquiries are received occasionally from manufacturers concerning an "electrolytic effect," as they call it, of heavy shades on cotton, which retards the passage of a thread or yarn through the eye of a needle, especially on the new high-speed knitting and sewing machines that are being used by manufacturers today to speed up production.

In our own observation we have noticed that this condition occurs mostly with dark shades and at once suspected static electricity from excessive dyestuff, made evident by crocking. Offhand one would say that increased relative humidity would reduce the tendency to generate static. Higher humidity would also probably increase the pliability of the yarn after coning and would favor its better behavior on knitting or sewing machines. Nevertheless, in the case where excessive dyestuff appears on the surface of the yarn, relative humidity would not change this condition.

In regard to the methods of application in package dyeing, there are disadvantages in the use of various types of dyestuffs. Vats, naphthols, and sulfur colors will crock very easily if they are not in proper solution for heavy shades in package dyeing where the liquor ratio is about 8 to 1 as compared with 20 or more to 1 in skein dyeing. Unfixed dye causes friction when yarn or thread passes through a high-speed knitting or sewing machine and therefore generates heat, causes yarn to bind, and gives it this so-called "electrolytical effect." Unfixed vat, sulfur, and naphthol pigment clings to package yarn and is very difficult to remove by scouring.

This condition also exists when direct colors are used to the point that the excessive amount of dyestuff in a concentrated bath does not actually dye the cotton but lies on the outside of the fiber. These fibers take up or exhaust just so much dyestuff from the dye bath until they reach a certain saturation point. Through the continued dyeing operation the excessive dyestuff will cling to the yarn and will be difficult to remove by scouring.

Alexander P Roy

The author discusses first the package dyeing of cotton yarns with special emphasis on the problem of avoiding a so-called "electrolytical effect," that is, poor crock fastness from loose or incompletely fixed dyestuff. Suggestions are offered for avoiding this effect not only with naphthols, vats and sulfurs but even with direct dyes.

The major part of the paper is concerned with the dyeing of spun and filament nylon, "Orlon" and "Dacron" yarns. Practical formulas are given for applying acid and chrome dyes at elevated temperature and pressure on nylon, and for dyeing "Orlon" acrylic fiber and "Dacron" polyester fiber by the "Hyperthermalized Process." Many dyeings from practical mill runs illustrating not only the recipes presented in the paper but other procedures were shown to the audience.

DYEING SULFUR COLORS —— Now, let us take up sulfur colors. When dyeing sulfur colors under pressure in heavy shades, especially black, we must consider whether the dye is being taken up properly. Exhaustion can be adjusted by the amount of sulfide and salt used. The real difficulty seems to be that the color in the bath gets out of solution; and even though an excessive amount of sodium sulfide is added, still the concentration of the bath, in terms of sulfide per gallon, is not sufficient to cause the redissolving of the dyestuff. It is obvious that the dissolving of sulfur dyestuffs in a large dye bath is very different from dissolving them in a relatively concentrated solution in a bucket, barrel or stainless-steel mixing tank with the regular amount of sulfide before addition to the dye bath.

There is a better method of retaining a sulfur color in its leuco compound so as to produce better affinity for the fiber. This is done by replacing about a quarter or a third of the sodium sulfide with a mixture of caustic soda and glucose. This will maintain the reduction and solution of the color, but the mixture is not inclined to oxidize as quickly as with straight sulfide.

Sulfur colors all possess a certain amount of combined sulfur in an unstable or oxidizable condition. This combined sulfur gives the color its solubility but oxidizes in time to an acid in the yarn. This can be remedied to a certain extent with sodium acetate, which neutralizes the acid. Nevertheless, this condition makes the thread harsh and dry and causes friction on a sewing machine. We have found that the lubrication of sulfur dyeings with a sulfonated olive oil or any good emulsified mineral oil will eliminate this friction, or electrolytical effect.

Sulfur colors can be boiled out and dyed in a one-bath operation with the use of a good penetrator and the addition of Calgon (about 1% per 100 pounds) to the

* Presented at the Penn-Sheraton Hotel in Philadelphia on March 7, 1952 and at the Hotel Patton in Chattanooga, Tenn, on May 17, 1952.

liquor. This will help break up any precipitation of the dye, along with metallic salt, on the surface of the thread.

NAPHTHOL DYEING———Naphthols have some of the same characteristics that sulfur colors have after dyeing, that is, naphthols that have been developed with a fast color salt leave the yarn harsh and dry unless properly finished. The method of application of these colors is, first, to impregnate the naphthol solution into the yarn, then, after running the yarn for the required period of time, to rinse the excess of naphthol liquor from the material. The excess of liquor is removed by rinsing with from 1 to 3% of caustic soda with the required amount of salt for 10 to 15 minutes. This process is repeated once or twice to clear off the loose naphthol. Otherwise, if not properly rinsed, the naphtholated material would carry over loose naphthol into the developing or coupling bath. Loose naphthol causes dyeings to have poor crock fastness. Sodium hexametaphosphate or Eunaphtol AS should be used in the naphtholating bath to create a clear and even suspension of color.

VAT DYEING———The successful application of vat dyestuffs has been a source of considerable difficulty to the dyer, especially on pressure machines in the presence of hard water. Hard water also presents a problem in other methods of dyeing. How well we all know that it is necessary to avoid the use of hard water as far as local circumstances will permit.

In vat dyeing the use of an excessive amount of hydrosulfite will create an acid, which, in turn, will neutralize the available caustic soda, causing the vat color to crock or precipitate badly. In pressure dyeing we have found that from 8 to 10% caustic soda and 6 to 8% hydro per 100 pounds of yarn (depending on pertinent conditions) will work out satisfactorily for heavy shades without the slightest indication of crocking.

Certain vat colors are sensitive to traces of calcium and can be improved by the addition of a water softener. The presence of a dyeing assistant eliminates the formation of an oxidized scum on the surface of the dyebath and creates a better dye dispersion with consequent improved penetration and leveling.

So much for the so-called "electrolytical effect" on cotton. We shall now move on to synthetics.

DYEING SYNTHETICS

The basic significance of the new synthetic fibers lies in the fact that several of them are far superior to the natural fibers in many important properties. In their present state of development, nearly all the new fibers must be regarded as special-purpose, rather than general-purpose fibers. Man-made synthetic fibers are creating entirely different problems and have brought about entirely different situations in various textile mills.

The various machines that have been developed for these fibers during the past ten years have created a great deal of technical, as well as mechanical, research and development in order to make them suitable for present-day end uses.

Dyers and finishers today are subjected to many problems in finishing these new fibers, whereas heretofore they concentrated mostly on perhaps four or five natural fibers.

Now, in order to acquire a knowledge of the materials to be colored, one must carefully study the chemical and physical properties of the various fibers together with the manner in which they react when brought into contact with the various chemicals used in scouring, dyeing, bleaching, mordanting, finishing and allied processes. A thorough knowledge of the substances to be used as coloring agents is obviously necessary to the dyer, but it is only when these operations have been studied from a chemical point of view, and such knowledge is combined with a thorough acquaintance with the chemical nature of the fiber, that the highest proficiency is attained in the art of textile coloring.

The reason that I have mentioned these facts to you tonight is that I have a few samples to exhibit, and some formulas to show you for processing nylon, "Dacron," and "Orlon" yarns. These samples should be very interesting because of the unconventional methods by which they were processed to obtain satisfactory results.

NYLON———First, we shall take the nylon samples. Nylon, a synthetic polymeric amide or synthetic-resin fiber, today can be dyed with practically any one of several groups of dyestuffs, including acid, chrome, acetate, neutral, metalized acid, vat, and naphthol dyes. All the work on exhibit was obtained from practical mill runs and not from laboratory work.

FORMULAS FOR FILAMENT NYLON

BLUE

The scoured nylon is entered into the dyebath at a temperature of 120 to 140° F, run for 10 minutes, and heated gradually up to 200° F. The machine is then closed, the temperature is raised to 250° F, and the dyeing is continued at this high temperature for 20 to 30 minutes.

2% Alizarine Supra Sky Blue R A
½% acetic acid, 28%
Rinse and finish.

CHROME NAVY ON NYLON

2% Erio Blue Black R, CI No 202
2% Erio Chrome Azurol B, CI No 720
4% acetic acid, 28%

Make additions of acid at 10-minute intervals. Run 45 minutes to 1 hour at 200° F. Rinse and chrome over at high temperature, 230 to 250° F, with

3% chrome and
1% acetic acid, 28%

Run 20 minutes, add 4% sodium thiosulphate, run 20 minutes and finish.

Sodium thiosulphate is a reducing agent for chrome, which insures maximum metallization of the dye within the nylon and completely removes residual dichromate. It also increases the fastness to washing and preboarding.

Please note the depth of shade obtained on the nylon samples here with metallized acid dyes without the addition of a dyeing assistant, such as ammonium acetate and without the use of acid. Application was carried out at high temperature and pressure.

Fastness tests show better than average color fastness:

a) Fade-Ometer for 100 hours.
b) No. 3 AATCC wash test shows very little change throughout.
c) Dry crocking very good; wet crocking also very good.

DACRON———"Dacron" is a polyester fiber, which resembles nylon in many ways, but the dyeing of Dacron has been a problem because of its very low absorptivity and its low affinity for most commercial dyes. The acetate group of colors are the most practical type to use, especially with the new carriers that are being developed each day for this fiber, such as paraphenylphenol, monochlorobenzene, orthophenylphenol, and a few other chemicals of this type. Monochlorobenzene, for example, is difficult to obtain, although orthodichlorobenzene is quite effective and is readily available.

The use of these carriers or swelling agents and good judgment in the proper selection of the acetate and azoic groups of colors must be exercised for processing, whether by high-temperature dyeing or the usual conventional methods of dyeing. The colors must not be volatile under the conditions of fixation or adversely affected by heat, that is, they must be resistant to sublimation.

The following formulas are those used in dyeing "Dacron" with acetate colors with our *Hyperthermalized Process**(1):

MAROON

500-pound lot of "Dacron" polyester fiber.
Wet out 15 minutes at 140° F with 0.5% of scouring agent. Rinse warm. Set bath with following:

4.5%	Acetate Rubine 3B, Pr 238
0.34%	Celliton Blue FFR, Pr 228
0.147%	Celliton Orange GR, Pr 43
0.5%	detergent or dispersing agent

The color is pasted with a good dispersing agent, then diluted with water at 180° F. After complete dispersion, the dye is strained into the machine and the temperature is raised to 250° F. Dyeing is carried out for 30 to 45 minutes. Finish as follows:

1) Hot wash 10 minutes at 200° F.
2) Scour for 20 minutes at 200° F.
3) Hot rinse until clear. Then finish with any one of the caticnic softeners.

Formula for dyeing the same shade on "Dacron" except under atmospheric conditions or by conventional methods:

HOLLYHOCK

1) Wet out 10 minutes with 0.5% scouring agent. Rinse at 140° F.
2) Paste the dye with 1% of dispersing agent, such as Levelene or Emtex N-25.
4% Amacel Rubine No. 9
4% Amacel Violet 3R
Add about 2 gallons water per pound of dye, boil up with steam jet for 2 to 3 minutes and strain into expansion tank. Raise temperature to the boil and boil 15 minutes. Add 10% orthodichlorbenzene emulsified with 2% Levelene and water as follows: To 10 parts of Orthine add 2 parts of Levelene with rapid stirring, then slowly add 50 parts of water (all parts by weight) to obtain a milky emulsion. Boil for 1 to 1½ hours after addition of the emulsion.
3) Drop bath, rinse, and soap off excessive color with 2% detergent. Rinse hot and finish.

It is to be noted that much greater depth of color is obtained at high temperature with less dye and chemicals. The above procedure will hold true with most carriers under atmospheric conditions.

ORLON———"Orlon", an acrylic fiber manufactured from polyacrylonitrile, is also classified as a hydrophobic fiber because of its very low water absorptivity and low affinity for most commercial dyes.

Both the type 41 staple and fiber stock as well as the continuous-filament type 81, are dyeable with acetate, vat, and acid types of dyestuff. The acetate, indigoid vat colors, and a few basic colors are limited for this fiber. Acid colors applied by the cuprous-ion method contribute a fairly decent range of colors. Where light fastness is required, the vats prove the most satisfactory, although all the dyestuffs mentioned, dyed at high temperatures, exhibit very good fastness to washing.

The application of acetate colors on "Orlon" is practically the same procedure as on "Dacron" except for the difference in swelling agents or carriers.

A few basic colors have good affinity on "Orlon" when dyed by our *Hyperthermalized Process**(*1*). They possess excellent wash fastness, but their light fastness is fair, or much better than on cotton.

The following dyeing procedures with basic dyes, such as Victoria Green B, Victoria Blue B, Thio Flavine T C, and Fuschia were used successfully on "Orlon":

SHADES WITH BASIC DYES

a) Scour yarn at 195° F for 15 minutes.
b) Rinse warm.
c) Paste dyestuff with glacial acetic acid.
d) Enter dye into machine cold, circulate for 15 minutes at 160° F, slowly build up temperature to 212° F, run 15 minutes, then increase to 250° F. Run for 30 minutes.
e) Rinse and scour at 160° F for 15 minutes.

Very good depth of shade was obtained with this method.

400 pounds of spun "Orlon" yarn was dyed by the following cuprous-ion method:

BROWN

a) Scour yarn and rinse warm. Add to dye bath at 140° F
3.7% Quinoline Yellow PN
2.76% Fast Red A, CI 176
2.24% Alizarine Irisol R, CI 1073
Raise temperature to 170° F.
Add solutions of folowing to dye bath:
3% copper sulfate
4% hydroxylammonium sulfate, or
8% glyoxal
b) Circulate 10 minutes. Add 3% phenol.
c) Close off expansion tank. Heat to 250° F. Run ½ hour. Drop bath and rinse.
d) Yarn is soaped off for 15 minutes at 195° F and finished.

The utilization of staple-fiber "Dacron" and "Orlon" yarns is more or less still in the development stage, and new uses are appearing as improvements are made in the physical characteristics and adaptability of the fibers. This is also true for continuous-filament yarns of these fibers.

I hope we all may have gained something from this discussion of practical methods for dyeing some of the important new synthetic fibers.

REFERENCE

(1) Dean and Sherk Company's *Hyperthermalized Process,* Patent Pending.

—♦ ♦—

Meeting Report
FDC Student Chapter

October 22, 1952
Rutherford, N J

THE first meeting of the new school year for the Fairleigh Dickinson College Student Chapter was held on the campus Wednesday, October 22, 1952 with 21 members present (9 old, 12 new).

Herbert Mauersberger, Director of the Textile Dept, presided initially, during which time the dates and sites of future meetings were decided. It was decided that chapter meetings would be held the second Wednesday of each month.

Following the collection of dues by the Treasurer, Nicholas Trocolar, Mr Mauersberger turned the meeting over to James M Polito, Chairman, who outlined the program for future meetings. It was suggested that field-trips be made to plants and laboratories, such as Botany, Forstmann, American Aniline and Interchemical. The showing of films on the subject of textiles was also suggested.

It was suggested that the practice of giving a dinner for the "parent" New York Section, which was initiated last year, be repeated. It was also suggested that the Chapter extend invitations to the Council and General Research Committee to meet at Fairleigh Dickinson College.

The possibility of holding meetings at night was discussed, but it was decided that schedule conflicts would hamper them.

Chairman Polito brought up the subject of a basketball team for the Chapter, giving an account of last year's team.

Officers of the Chapter for this year include: James Polito, *Chairman;* Joseph Nosal, *Vice Chairman;* Nicholas Trocolar, *Treasurer;* Charlotte Dietrich, *Secretary.*

NOTICE TO AATCC MEMBERS

The following letter by Arthur J Jones, Chief, Employee Utiliz Br, Civilian Personnel Office, Philadelphia Quartermaster Depot, U S Army, 2800 South 20th Street, Philadelphia 45, Pa, is called to your attention:

"The Textile and Leather Division of the Research and Development Laboratories at this Depot is in need of technical personnel with research experience in the general field of physics, physical chemistry, engineering or other technology which may be applicable to studies of fibers, fibrous structures and fabrics. These positions are covered by the provisions of Federal Civil Service employment and offer the following advantages:

a. Periodic salary increases of $200 at eighteen month intervals.
b. Annual or vacation leave entitles employee to thirteen to twenty-six working days leave per year, depending upon the length of Federal service. When an individual leaves a Government job, he is paid for the unused balance of annual leave. Sick leave benefits provide health insurance of thirteen days sick leave a year, cumulative without restriction.
c. The laboratories operate on a forty-hour week. Overtime is paid for on a sliding scale basis or by granting time off in compensation.

The present staff in these laboratories contains a well-trained nucleus of technologists in these fields to which it is desired to add project managers, group leaders and technical aides to open new fields and to strengthen existing fields of investigation in textile technology. The laboratories are well equipped with all of the most modern instruments required for conducting studies in these fields. Salaries are commensurate with similar positions in industrial laboratories. Freedom of research, programming and publication is encouraged.

Professional employees are strongly urged to participate in and attend meetings of their professional societies. In fact, compensation in the form of travel and per diem expenses may now be granted to our representatives for attendance at professional and technical gatherings. In addition, there is a close cooperation and liaison between our laboratories and many of the principal industrial laboratories and universities of this country, thus enabling our technologists to keep abreast of parallel research as well as the very latest developments in their specific fields.

Additional information will be furnished on request. Interviews are available Monday thru Friday between 8:30 AM and 3:30 PM. We will welcome any inquiries".

PHOTOS—1952 CONVENTION—HOTEL STATLER—BOSTON

PHOTOS

Courtesy of John Trezise

(Additional Convention Photos on Following Page)

1952 CONVENTION — BOSTON, MASS.

New York Section Meeting Report

November 21, 1952
Kohler's Swiss Chalet, Rochelle Park, N J

A MEETING of the New York Section was held on Friday evening, November 21, 1952 at Kohler's Swiss Chalet, Rochelle Park, N J.

The Chairman, Weldon G Helmus, announced that the New York Section had won third prize in the Intersectional Contest for its paper "Factors Influencing Dye Fixation on Padded Rayons". He expressed the appreciation of the Section to the following members of the Contest Paper Committee: Harry Moore, *Chairman* (Fair Lawn Finishing Co), Ormond W Clark (Calco Chemical Division, American Cyanamid Company), Charles Minoff (Texstyle Corp), Herman P Baumann (American Aniline Products, Inc), Lawrence S Thompson (General Dyestuff Corp) and Dr Paul Wengraf (Consultant).

The Chairman reminded the members that their ballots in the national election had to be post-marked by noon of the following day in order to count.

Paul J Luck, Chairman of the Nominating Committee, presented the name of Patrick J Kennedy as Councilor for three years. Mr Kennedy was unanimously elected.

P J Wood spoke briefly on the building fund for Fairleigh-Dickinson College and, upon recommendation of the officers of the Section, the members approved the donation of $500 to this fund.

Following introductory remarks by Charles W Dorn, the film "Quality Control in Modern Merchandising" was shown. This film was produced by J C Penney Co.

William Armitage, Burlington Mills Corporation, presented a paper entitled "Specifications and Controls for Commission Dyeing". This paper was prepared by Mr Armitage and Jack Leach, also of Burlington.

The attendance was approximately 200.

NEWS

• Victor Introduces New Processing Aid for Wool Dyeing

Dedication of a process patent to the textile industry as a contribution toward increased manufacturing efficiency and lower production costs in dyeing wool was announced on December 6th by Victor Chemical Works, a major producer of phosphorus, phosphates, formates, oxalates, and other industrial chemicals.

Details of the process were given Friday at a meeting of the Northern New England Section, AATCC.

The patent, acquired by Victor Chemical from Pacific Mills, Lawrence, Mass, is said to be the result of several years of development work to improve dyeing processes carried on at Pacific Mills.

"The development work, which has been carried through to commercial production," according to Rothe Weigel, President of Victor, "apparently offers much to textile men in their constant fight with rising costs and competitive market conditions." Because of this, Victor has purchased the patent covering the process and will issue royalty-free licenses to companies desiring to use the process.

"The process involves the use of the highest quality diammonium phosphate which is readily available, and our company is one of the major producers," Mr Weigel stated.

Major advantages of the Pacific Mills-Victor diammonium phosphate process are said to be:

1) Insurance of proper control of the dyebath.
2) Proper and controlled conditioning of the cloth before dyeing begins.
3) A gradual increase in acidity to assure fixation and dye exhaust.
4) Uniformity of processing.
5) Improved and increased levelness of dyeing.
6) Thorough and efficient use of dyestuff, thus reducing the quantities required and saving in cost of dyes.
7) The ready availability in quantity of high quality diammonium phosphate at low cost.
8) Saving of man-hours and actual production loss because of the substantial reduction in the percentage of rejects due to improper processing.

The process reportedly requires no major changes from the usual wool dyeing procedure, and standard equipment can be used in adopting the process and making it effective.

Victor is making available complete data developed by Pacific Mills which lists the dyes used and the exact method of use, it is learned.

The several years of work with the process reportedly indicate that the process shortens manufacturing time, output is increased by the cutting down of the amount of cloth rejected because of failure to meet final inspection requirements, and uniformity of color is substantially improved.

• ISO Group Makes Marked Progress in Colorfastness Test Methods

Marked progress in the development of international test methods pertaining to various aspects of colorfastness on textiles resulted from a three-day conference in New York, November 10-12, at which textile specialists of six countries, including the United States, took part.

The meetings, held at the headquarters of the American Standards Association, were part of a project of the International Organization for Standardization underway since 1948. Representatives of the standards organizations of Canada, France, Germany, Switzerland, the United Kingdom and the United States participated as members of TC-38 subcommittee 1 concerned with the subject.

Agreement was reached on the general principles of the fastness tests and on specific test procedures. Test methods considered were of two types—those pertaining to colorfastness to processing treatments and those pertaining to fastness to use conditions. In the former group, test procedures for fastness to each of the following agencies were agreed upon: water, water spotting, sea water, rubbing, acid-spotting, alkali spotting, carbonizing, peroxide bleaching, potting, mercerizing, stoving, soda-boiling, chlorination, chrome and metals in dyebaths, and hypochlorite bleaching.

Use tests considered included fastness to such items as perspiration, light, cross-dyeing, and washing.

Two methods for colorfastness to light were considered. Of these, the daylight method was confirmed, but the carbon arc method, practiced largely in this country, was held over for further discussion. A test method for hand washing was agreed upon, but the severe laundry washing test is yet to be determined.

Two "gray scales" were accepted for rating the magnitude of color changes in various tests. These scales consisted of five shades of gray—one scale for the evaluation of color loss and the other for the determination of the degree of staining or "bleeding" of colors onto white fabrics.

Test procedures for fastness to perspiration and cross-dyeing were held over for further consideration. The cross-dyeing test had been circulated to the group too recently to reach agreement on it, and test procedures for fastness to perspiration are to be restudied because of new research data. Dr P W Cunliffe, Society of Dyers & Colourists, Yorkshire, England, reported that investigations have revealed natural perspiration contains compounds not heretofore included in the artificial liquids used in tests. Histamine, an amino compound, is the principal property discovered. It is now realized that this compound, and any others discovered, will have to be introduced into the artificial test liquids to give results comparable to those produced by natural perspiration.

Completion of the standards and final agreement by all of the nations should occur within a year, according to Dr William D Appel, National Bureau of Standards and chairman of the meeting. He expressed satisfaction at the degree of unanimity reached by the group, in spite of the various points of view that had to be resolved. Revised drafts are now to be circulated to the member groups for consideration and ultimate approval at the next meeting.

In addition to those participating in the discussions, the following nations also have representation on the committee: Czechoslovakia, Denmark, Netherlands, India, New Zealand, Norway, Sweden, Union of South Africa, and the U S S R.

Foreign delegates attending the meetings, in addition to Dr Cunliffe, were: Colin H Bayley, National Research Council of Canada; E W Burnthall, Ciba Company, Montreal; J P Niederhauser, Compagnie Francaise des Matieres Colorantes,

Paris; Dr Paul Rabe, Farbwerke Bayer, Leverkusen, Germany; Dr Wilhelm Weltzien, Technical University, Aachen, Krefeld, Germany; Henry Ris, J R Geigy AG, Basle, Switzerland; Keith McLaren, Imperial Chemical Industries, Ltd, Manchester, England; and E Wilson, Bradford Dyers Association, Bradford, Yorks, England.

• 23rd Annual Meeting, TRI

Martin J Lydon, president of Lowell Textile Institute, provided the climax for the 23rd Annual Meeting of the Textile Research Institute with his address "Textile Education and the Challenge of the Future". The two-day meeting, which featured seven outstanding technical papers as well as a number of exhibits devoted to the latest in synthetic fibers and fabrics, textile testing apparatus and laboratory equipment, was held November 17-18 at the Hotel Commodore in New York.

Mr Lydon, in his address, integrated the various types of educational and research institutions of the textile field into a coordinated pattern for the future. "Education and research always go hand in hand to achieve true progress and this is particularly true in the textile field", he maintained. He also went on to point out that, while there are a number of textile research and educational institutions in this country, the requirements of modern industry for both applied and fundamental research and for technologists with many types and degrees of training are so great that existing facilities cannot begin to meet them.

The technical papers presented at the two-day parley included the following:

"The Elasticity of Cotton", Helmut Wakeham, Textile Research Institute.

"Studies in the Resilience and Crease Resistance of Fabrics", R G Stoll, Textile Research Section, Central Research & Development Laboratories, Celanese Corporation of America, Summit, New Jersey.

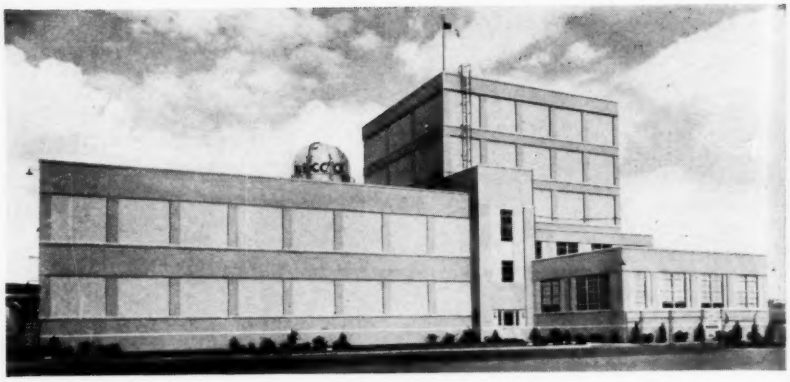
"Fiber-Forming Phenomena with Certain Proteins", E H Mercer, Commonwealth Scientific and Industrial Organization of Australia.

"Fundamental Improvements in Regenerated Cellulose Fiber Structures", Nicolas B Drisch and Leonard Soep, Comptoir des Textiles Artificiels, Paris, France.

"Studies of Aging in Worsted Processing", Harris M Burte and Richard O Steele, Textile Research Institute.

"Radioactive Tracer Techniques in Textile Research", Howard J White, Jr, Textile Research Institute.

"Factors Influencing Clothing Comfort", Orville C Wetmore, Textile Research Division, Textile Fibers Department, E I du Pont de Nemours & Company, Inc.



This new Buffalo Electro-Chemical Company plant in Vancouver, Wash, is said to constitute the first major expansion in the country's hydrogen peroxide facilities during recent years. This new supply source is designed to fill all the Company's west coast requirements, making more of Becco's Buffalo production available for the eastern, southern and central states.

• POCA Changes Name

The 21-year-old Processing Oils and Chemicals Association will change its name to the Textile Chemical Manufacturers Association, Pres E E Rettberg, Jr, announced on November 19.

At a special meeting at the Hotel New Yorker, it was also voted to limit membership to those firms "engaged in the manufacture and sale of chemical specialty compounds for the textile industry and whose principal business is manufacturing," he said. The present membership falls into this category.

The TCMA, the only group of its kind in the textile field, will be strictly a management organization. Mr Rettberg said, with each member having the right to name a management executive as its representative.

"Members are pledged to maintain high quality of products and ethical standards, and this organization will endeavor to establish among its customers in the textile field a feeling of confidence in the TCMA members," Mr Rettberg continued. Plans are going forward to develop a seal which will be placed on all shipping containers indicating supplier's membership in the TCMA.

Officers elected at the recent annual meeting in Atlantic City are: *president,* E E Rettberg, Scholler Bros, Inc, Philadelphia; *vice president,* L L Grombacher, Standard Chemical Products, Inc, Hoboken, N J; *secretary-treasurer,* Clyde D Marlatt, New York.

The board of directors includes:

J E Allen, Arkansas Co, Inc, Newark, N J; V H Berman, Onyx Oil & Chemical Co, Jersey City, N J; S G Davenport, Kali Mfg Co, Philadelphia; H B Dohner, Amalgamated Chemical Corp, Philadelphia; William J Duddy, American Analine & Extract Co, Inc, Philadelphia; Joseph B Evans, Dexter Chemical Corp, New York; W F Fancourt, 3d, W F Fancourt Co, Philadelphia; Mr Grombacher; John M McChesney, Leatex Chemical Co, Philadelphia and Mr Rettberg.

• New NECSC Storage Terminal

Andrew J Worenka, president and treasurer of the New England Chemical Supply Corp, Manchester, N H, has announced the completion of a new bulk liquid storage terminal for chemical and solvent storage at Grasmere, N H.

One of the features of the plant is its dependability on gravity for unloading tank cars to filling drums at the drumming station as well as tank truck filling from storage tanks. This new terminal is located on a newly-acquired twenty-acre tract at Grasmere, N H. Also included in the Company's expansion program is the leasing of a 10,000 foot warehouse at South Gardiner, Maine, for distribution of chemicals in Central and Southern Maine areas. The South Gardiner facilities are said to include a 400 ft wharf which permits ocean barges to dock there. The company reportedly plans bulk storage of several chemicals at the South Gardiner location.

• Aula Chemicals to Market Aulabrite Colors

Dr Leslie L Balassa, vice-president of Aula Chemicals, Inc, Elizabeth, N J, has applied for trade mark registration of the name "Aulabrite". This brand name will be featured on all printing colors manufactured by Aula Chemicals. Improvements, covered by recent patents granted to this firm, have been incorporated into the "Aulabrite" line of colors.

It is stated that textile prints obtained with "Aulabrite" colors show exceptional depth and brilliance. The patents under which the "Aulabrite" colors are manufactured are wholly owned or controlled by Aula Chemicals, Inc.

The Opening of National Starch's Alexander Research Laboratory, Plainfield, N J, marks the latest step in the Company's $2 million resin expansion program. From a small adhesives plant in New York, N Y, the Company has expanded to four plants in the United States, two in Canada, one in England, and one in Holland.

(Below): Frank Greenwall, National Starch president, and Mrs Greenwall unveil a plaque dedicating the laboratory to the memory of Mrs Greenwall's father, Alexander Alexander, founder of the Company in 1895.

• PTI Fund Campaign Launched

A $5,000,000 Development Campaign for building and endowment funds was launched November 10th by The Philadelphia Textile Institute Foundation.

Fred C Scholler, President of the Foundation and Campaign Chairman, has pointed out that this comprehensive program includes a $400,000 Auditorium-Gymnasium and an $800,000 Dormitory for 150 students, to be built on the present Philadelphia Textile Institute site at School House Lane and Henry Avenue, Germantown, Pa.

Additional capital expenditures call for a new $100,000 Finishing Department and $500,000 for equipment and plant modernization. Administration and Faculty needs, including a pension fund, will cost $200,000. Endowment funds of $3,000,000 or annual sustaining funds of $100,000 a year, complete the Development Fund Program.

In announcing the campaign, Mr Scholler stated, "In 1949, the Philadelphia Textile Institute moved to its new $2,500,000 campus in Germantown and in line with the tremendous development of the college, this campaign represents the minimum amount needed to complete our long range plans".

The Philadelphia Textile Institute Foundation, a nonprofit corporation organized in 1945 to raise and to administer funds for textile education, has its office at the Philadelphia Textile Institute, 3243 School House Lane, Philadelphia, Pa.

• Aquex for Cotton Stabilization

Aquex finishing resins for textiles, which have heretofore been used widely in connection with rayon fabrics, are showing promising results in the stabilization of cotton and cotton blend fabrics, according to a recent announcement by General Manager E W Sweet of the Aquex Development and Sales Corp, Whippany, N J.

Mr Sweet said that extensive field tests are showing that Aquex renders improved hand for cotton fabrics. He also stated that the Aquex-treated cotton fabrics show improved tensile and tear strength over previous resin finishes.

Details of the Aquex applications with cotton will be announced later, he said.

• Dexter Set to Double Production Capacity

New facilities which will double the present production capacity of Dexter Chemical Corp, New York, are scheduled for next year, according to an announcement by a Company spokesman on November 8th.

The expansion program, approved recently by the Board of Directors, has been necessitated by the steady increase of sales by the Corporation's Textile Chemical Division, Joseph B Evans, director of sales, reported at the annual sales meeting. This year, he said, sales reached an all-time peak for the division.

The Corporation's main offices and production facilities are located in New York with sales offices in Boston, Mass, Greensboro and Charlotte, N C, Atlanta, Ga, and Buenos Aires, Argentina.

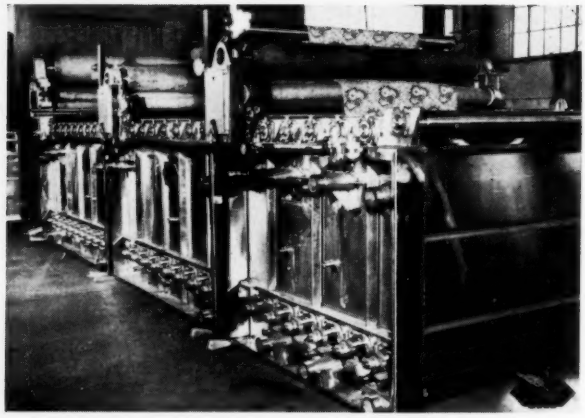
Sidney M Edelstein, technical director, told the sales force that 12 new products had been developed and marketed in the past year, bringing to a total of more than 300 specialty chemicals now being produced. Of the new products, two were advanced types of antistatic agents.

During the past year, high-sulfonation equipment has been put into operation resulting in a considerable increase in production of current sulfonated products, as well as the development of several new ones.

Dexter will announce shortly a new line of dispersing agents, dye assistants and wetting agents based on phosphated alcohols, the basis of the highly successful Barisol BRM product, Mr Edelstein revealed. This development, in his estimation, will open up a whole new field in the treatment of textile fibers and fabrics.

In line with the Corporation's increased research and development work, Mr Edelstein has announced that Ernest Welles, former group leader with Foster D Snell, Inc, chemical consultants, has joined Dexter's laboratory staff as a research chemist.

Ernest Welles



Rodney Hunt Tensitrol* Open-Width Washer

• Tensitrol* Washer Has New Use

Additional uses are being found for the Rodney Hunt Tensitrol Open Width Washers as demonstrated in installations for the boiling off of rayon fabrics.

Tensitrol* Washers reportedly allow the fabric to obtain sufficient initial shrinkage during the boil-off process to be ready for dyeing in rope form without danger of rope marks and crack marks. Excellent results have been reported on spun rayon fabrics as well as on many plied yard crepe fabrics.

One user reports that the smooth condition of the fabric during the boil-off plus the several squeezers utilized on his machine is of material help to set the fabric in preparation for rope handling.

Interesting results have also been reported on crepe fabrics. It is claimed that on many fabrics a more regular crepe effect is obtained when boiled-off on the Open-Width Tensitrol Washer, than with conventional boil-off machines. Still other crepes have been produced with an entirely different surface appearance than usual. More work is contemplated to establish the possibilities of the new effects and to determine trade reaction.

In a four compartment machine excellent size removal is obtained and the smooth operation of the Tensitrol Open Width Washer assures a continuous flow of boiled-off fabrics for the dye becks, it is claimed. The same washer is also said to be useful for washing off resin-treated and water-repellent-treated fabrics.

The illustration shows the Tensitrol Open Width Washer incorporating all the latest construction features. The tub construction features sturdy side panels with resistance-welded ribbing for strength and corrosion resistance. All tub ends are Rodney Hunt patented Curve-of-Strength* construction with V breaks incorporated in the sheet for stiffness.

One of the latest improvements now available is the new compact squeezer design, which is said to be especially suited for use on Open-Width Machines. The pneumatic pressure is now obtained by the new diaphragm pressure cells that eliminate the older style air cylinders. The new squeeze roll arrangement is said to be ideal for mounting bow rolls, spray pipes, and other auxiliaries commonly used on Open-Width Washers. The new design of diaphragm pressure cells is also a space saver while providing full advantage of finger-tip control of pressure.

* Reg trade-mark

• National Aniline Building Second Plant at Moundsville

National Aniline Division of Allied Chemical & Dye Corporation is starting construction of a new plant for the production of maleic anhydride and fumaric acid on its recently acquired plant site south of Moundsville, W Va. The new plant, it is stated, will substantially increase National's maleic anhydride capacity. It is located adjacent to National's new aniline plant now in the course of construction.

F J Krueger, Engineering Manager, National Aniline Division, will direct the new Moundsville project for which, it is reported, the Defense Production Administration has awarded a Certificate of Necessity covering 50% of the cost of the facilities estimated at $4,500,000. Completion is scheduled for late 1953 or early 1954.

• New Du Pont Textile Research Lab

Preparation of the site for Du Pont's new $5,000,000 textile research laboratory in Wilmington will begin sometime this month, but actual construction awaits approval now being sought from the National Production Authority, the company has announced.

The building, planned for textile research now being done in four scattered locations for the Textile Fibers Department, will be located on a 160-acre plot across from the Ferris School for Boys on Center Road.

The director for the new textile research laboratory will be Dr Linton G Ray, Jr, who has been connected with the investigation of properties of synthetic fibers since he joined the company in 1943. He was named to the laboratory directorship in September of this year.

Offices and laboratory will be in a two-story section 282 feet long and 62 feet wide across the top of the "T" shaped structure. Laboratory equipment, textile areas, service and operating areas, will be located in a single story section 202 feet wide extending back 298 feet to form the bottom of the "T".

In addition to being used for the textile research division of the Textile Fibers Department, the new building will also centralize the department's customer service laboratories.

Dr W L Hyden, director of the textile research division, said that the building will contain 17 different rooms for laboratories in which will be studied the application of textile fibers, including "Orlon" acrylic fiber, "Dacron" polyester fiber, nylon, acetate, and rayon, to a variety of textile uses. Studies will also be made to determine which fibers, or combinations of fibers, are best suited for specific uses.

"The new laboratory will provide facilities for fundamental and applied research on various phases of textiles. Chemical and physical laboratories, with requisite offices for technical personnel plus versatile equipment for conventional and special textile processing, are planned for the building," Dr Hyden said. "This will include complete but small-scale equipment designed to handle fibers in quantities of less than one pound to several hundred pounds, all the way from yarn and staple to the finished dyed fabric".

It will reportedly accommodate approximately 100 technically trained personnel and an additional 200 technicians, operators, and clerical aides.

Currently the personnel of the textile research division is located in four widely separated locations in the Wilmington area: Newport, Del, Vandever Avenue, the Du Pont Experimental Station and Deepwater, N J. The laboratory is designed to consolidate the activities of the department's textile research division.

Dr Hyden has stated that, if the NPA approves the project and Du Pont can get steel in the first quarter of next year, it is quite possible that the building may be ready for use sometime early in 1954.

• Solvay Soda Ash Expansion Program

Announcement of plans to proceed with the second step in rebuilding of soda ash manufacturing facilities at the Syracuse plant of Solvay Process Division, Allied Chemical & Dye Corporation, was made recently.

The newest project in Solvay's modernization and expansion program at Syracuse, involving practically a duplicate of the soda ash plant recently completed and dedicated, will reportedly require an expenditure for buildings and equipment in excess of $10,000,000.

A B Chadwick, President, said that preliminary work will be started immediately with the job expected to take nearly two years to complete.

Sections of the building will rise to a height of more than two hundred feet, matching the first part of the new plant, it is learned.

The initial unit of the new soda ash plant was planned with extension in mind. Both east and west sides were enclosed by temporary metal sheathing to permit further expansion.

Part of the existing old soda ash plant which was constructed in 1912 and is still in operation will be razed to make way for the addition.

The new building, designed by Solvay's Engineering Department, will be of buff-colored tile and extensive use will be made of glass blocks as has been done in all of the firm's new structures put up since 1945.

The second step in the soda ash reconstruction program calls for a building almost a duplicate of the initial structure which is equal in height to a fifteen-story office building.

• College-Industry Cooperative Program Lectures

Lowell Textile Institute's College Industry Cooperative Program opened its second annual series of lectures and demonstrations in practical applications of industrial chemistry at the A C Lawrence Leather Company in Peabody, Mass, on Wednesday, October 15th, with twenty-five supervisors and production personnel in attendance.

The Program, which makes staff members at the Institute available for specialized instruction at production and processing area in industry, was established a year ago by Martin J Lydon, LTI President, and continues to be under the supervision of Dr Albert E Chouinard, Head of the Institute's Leather Engineering Department, and the sponsorship of H N Goodspeed, President of the Peabody concern.

J A Lichterman

• Whistlclean Corporation Formed

Formation of The Whistlclean Corporation to market "Whistlclean" industrial cleaners, detergents, disinfectants and insecticides was recently announced by L Sonneborn Sons, Inc, New York. "Whistlclean" products have been sold for nearly 50 years to American industry by American Oil & Disinfectant Corp, another Sonneborn subsidiary. Joseph A Lichterman, former sales manager, has been named vice president and general manager of the new corporation. Headquarters for the corporation will remain at 80 Eighth Avenue, New York, N Y.

In its early years, "Whistlclean" was sold as an all-purpose industrial cleaner and detergent. More recently, a wide line of "Whistlclean" products has been developed to meet the specialized cleaning problems of many types of industries, including textiles. Other maintenance products have also been developed to round out a complete line of "Whistlclean" products for all types of industrial cleaning jobs. A Service Department, with headquarters at the Sonneborn factory in Nutley, N J, has been set up.

• DCAT Elects New Officers

Lloyd I Volckening, President, The Ivers-Lee Company, was elected Chairman of the Drug, Chemical and Allied Trades Section of the New York Board of Trade (DCAT) at its 62nd Annual Meeting. Other officers in addition to Mr Volckening who will serve during the next fiscal year are: *Vice Chairman*—Stanley I Clark, Vice President, Sterling Drug Inc; *Treasurer*—Hugh S Crosson, McKesson & Robbins, Inc (reelected); *Secretary*—Helen L Booth (reelected). James G Flanagan, Vice President, S B Penick & Co, was reappointed Counsel.

The retiring Chairman, Charles M Macauley, President, Charles M Macauley & Associates, was elected Section Representative to the Board of Directors of the New York Board of Trade.

• Warp Knit Fabric Group Meets

A group representing practically all segments of the warp knit fabric industry met at American Viscose Corporation's Textile Research Department in Marcus Hook, Pa, on Nov 20th and named several task committees to work out possible solutions to specific problems directed at greater uniformity in nomenclature and testing methods and agreements on tolerances.

Attending were more than thirty individuals representing, in addition to American Viscose Corporation, the American Association of Textile Chemists and Colorists; the American Association of Textile Technologists, Inc; the American Society for Testing Materials; the Warp Knit Group of the National Federation of Textiles, Inc, and the Underwear Institute. Present also were representatives of several independent knit fabric dyers and finishers.

The group was welcomed by Harry L Dalton, American Viscose Corporation's Vice-President in Charge of Sales and Public Relations. John C Wilmerding, manager of the corporation's acetate sales division, presided, and Graeme Whytlaw, assistant director of the Textile Research Department, acted as host.

• AFCA Technical Manpower Commission Named

Colonel Louis W Munchmeyer, President of the Armed Forces Chemical Association and Assistant General Manager of Ansco Division of General Aniline & Film Corporation, has announced the appointment of an Armed Forces Chemical Association Technical Manpower Commission.

Dr Walter E Lawson of E I du Pont de Nemours & Co, Inc, a former Marine officer, is Chairman of the Commission. The other members are Dr Donald B Keyes, Arthur D Little Inc and Consultant, Committee on Manpower, National Association of Manufacturers; Colonel Harry A Kuhn, USA (Ret) Allied Chemical & Dye Corporation; Colonel Oscar C Maier, AAF (Ret) Director of Research and Development of Pullman-Standard Car Manufacturing Company; Vice Admiral Earle W Mills (Ret), Chairman of the Board of Foster Wheeler Corporation; and Major General William N Porter (Ret), a Naval Academy graduate and war-time Chief Chemical Warfare Service, now President of Chemical Construction Company. In addition, Major General Melvin J Maas, Marine Reserve (Ret), Member Reserve Forces Policy Board, Department of Defense, ex-Congressman and ex-Vice President of Sperry Gyroscope, will act with the Commission in an advisory capacity.

• Customs Official Addresses SOCMA

United States Customs laboratories, in the process of providing technical data upon which the determination of tariff duties depends, examine some 100,000 samples covering all types of imported materials each year, John F Williams, Chief of the Division of Laboratories, U S Bureau of Customs, told the Synthetic Organic Chemical Manufacturers Association at a luncheon at the Hotel Commodore in New York last month.

Mr Williams described the organization and activities of Customs laboratories and their methods of establishing the facts on which tariff classification of imports are based.

Trade agreements, as well as industrial development of new organic chemical products abroad, have reportedly increased the customs laboratory work load. To meet this increase without additional personnel, laboratory methods have had to be improved, personnel better trained, laboratories better equipped, and a system of rapid exchange of information set up between district laboratories, Mr Williams stated.

Some of the more difficult problems relate to the classification of the newer chemical products, many of them unknown in 1930 when the present tariff law was enacted. He stated that one of the important laboratory tasks is to provide uniform test procedures so that duties on one kind of merchandise will be the same regardless of where entry is made into the United States.

NAMES IN THE NEWS

THE following personnel promotions and additions at the Southern Dyestuff Corporation became effective on November 1st:

JOHN L CRIST, founder, president and treasurer since 1936, assumes the title of Board Chairman and Treasurer. LELAND G ATKINS, co-founder with Mr Crist and vice president since 1936, has been promoted to President. JOHN L CRIST, JR has been elected Vice President and Sales Manager.

The Company has also announced that RAPHAEL E RUPP and FEASTER V TRIBBLE have joined the Sodyeco sales organization in the capacities of Director of Sales Service and Manager of Sales Service (Printing), respectively. Dr Rupp has been superintendent and technical director of Pacific Mills for 25 years. He has also been very active in the Piedmont Section, AATCC, having served as an officer.

CARLYLE G CALDWELL has been elected an assistant vice president of National Starch Products, Inc.

A native of Little Rock, Arkansas, Dr Caldwell joined National's research staff in 1940. He has been Research Director since 1948.

A recognized authority on starches, adhesives and resins, Dr Caldwell is author or co-author of many of National's patents.

C G Caldwell

H C Whittemore, Jr

HAROLD C WHITTEMORE, JR has been appointed vice president of the Warwick Chemical Company, Division of Sun Chemical Corporation.

Mr Whittemore joined Sun in 1946 and served five years with them in Chicago. His most recent position has been assistant to the president at Sun's headquarters in New York.

In his new capacity, Mr Whittemore will have his headquarters at the Wood River Junction, Rhode Island, plant. DONALD J ECCLESTON and IRA S HURD will continue as general manager and general sales manager respectively under Mr Whittemore.

RICHARD H HAIGH, assistant to the vice president, Barrett Division, Allied Chemical & Dye Corporation, New York, N Y, has been appointed chief of the Coke and Coal Chemicals section, Solid Fuels Branch, Rubber, Chemicals, Drugs and Fuels Division, OPS. He succeeds JAY D SAYLOR who has returned to his post with the Koppers Company, Pittsburgh, Pa.

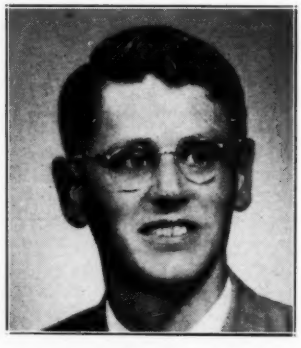
Mr Haigh is on six months leave of absence from Allied Chemical to accept his new office with OPS in Washington. With Allied Chemical he handled administrative affairs of the sales department, including sales programs, budgets, costs and various analyses.

DONALD F MURPHY was elected a vice president of Rohm & Haas Company, Philadelphia, Pa, on October 28th.

Mr Murphy started working as an entomologist in the company's laboratories in 1930, and later was named head of its Entomology Laboratory at Bristol, Pennsylvania. In June 1943 he was appointed sales manager of the company's Agricultural & Sanitary Chemicals Department, and in recent years has, in addition, directed sales of its Textile and Export Departments. In April 1951 he was named an assistant secretary of the company. During the past year Mr Murphy has devoted much of his time to expanding Rohm & Haas export business throughout the world.

EDWARD A MURRAY, for the past 6½ years a member of Deering Milliken Research Trust (the last 4½ of which he was in charge of the Chemical Section), has resigned to initiate a consulting service in the fields of sizing and finishing. His offices will be at 1113 Springdale Rd, Anderson, S C, and at the Textile Department, Clemson College, where he will work on a special project related to cotton finishing.

Dr Murray is a former secretary of the Western New England Section, AATCC.



E A Murray

F C Grant

THE appointment of FRED C GRANT to the post of general sales manager for Crown Chemical Corporation, Providence, R I, has been announced by Walter E Murray, President.

Prior to joining Crown, Mr Grant was associated with General Dyestuff Corporation for many years where he was instrumental in the initial sales development of their Textile Chemical Division. Following this he joined Synthron Inc, Ashton, R I, as sales and technical representative during which period much emphasis was placed upon the promotion and development of special resin finishes.

Most recently Mr Grant was associated with the M W Dunton Company, Providence, R I, where he served as vice-president in charge of sales.

LAWRENCE S THOMPSON, formerly head of the Mixed Fiber Department of General Dyestuff Corporation, has been made technical manager of the newly-formed Cotton Section.

In this Section will be THOMAS J WALSH, recently appointed head of the Vat Department to succeed J H HENNESSEY; BERT CELENTANO, head of the Naphthol Department; ERNEST M TAYLOR, head of the Direct and Sulfur Department; and ULRICH HUTTEN, head of the Mixed Fiber Department.

G W SEYMOUR, Vice President of Celanese Corporation of America, was named on November 7th to the newly-established corporation post of Co-ordinator of Process and Technical Control. In his new position, Mr Seymour will be responsible for co-ordinating and maintaining liaison among the corporation's three operating divisions—Textile, Plastic and Chemical—and affiliated companies in Canada and Latin America on all matters pertaining to process and technical control.

DR B B ALLEN has been appointed manager of the Summit, New Jersey, research laboratories. Previously he had been associate director of the laboratories.

M R Lake

J G Sibley

MARY RUTH LAKE and JOHN G SIBLEY have joined Wica Company, Inc, Charlotte, N C.

Miss Lake, formerly head librarian of the Liggett and Myers Research Dept (Durham, N C), is now a member of Wica's sales service laboratory staff.

Mr Sibley has joined Wica's Research and Development Department. He was formerly connected with the Charlotte Chemical Laboratories and the Solvay Process Research Department as a chemist.

NEW officers and trustees of the Textile Research Institute, as elected at the 1952 Annual Meeting last month, include the following:

President—PERCIVAL S HOWE, JR (American Thread Co)

Vice President and Chairman of the Executive Committee — JULIUS B GOLDBERG (J P Stevens & Co, Inc)

Treasurer — DONALD H POWERS (Warner-Hudnut, Inc)

Secretary — PAUL C ALFORD, JR (TRI)

Trustees—EARL E BERKLEY (Anderson, Clayton & Co), HAROLD J WALTER (Bachmann Uxbridge Worsted Corp) and RICHARD D WELLS (Bates Mfg Co)

R W Merritt

ROBERT W MERRITT, assistant vice president, National Starch Products Inc, recently returned from attending the International Plastics Meeting in Dusseldorf, Germany.

While in Europe Dr Merritt also visited two of National's affiliates — Nationale Zetmeelindustrie, N V Veendam, Holland and National Adhesives, Ltd, which is located at Slough, just outside of London, England.

These two companies make most of the products for export trade conducted by National in Europe and elsewhere.

J D LOWERY, Manager of American Cyanamid Company's Heavy Chemicals Department, announced on November 3 the appointment of three District Managers.

Named Eastern District Manager was J A LEEK, formerly New York Metropolitan District Manager for the Industrial Chemicals Division. With headquarters in New York, N Y, he will supervise heavy chemical sales in New England and other Atlantic Seaboard states extending as far as Western Virginia.

Serving as Southern District Manager is E J ADAMS, formerly a sales representative for the Industrial Chemicals Division. He will supervise heavy chemical sales in an area extending from Richmond, Virginia to and including Texas and Oklahoma. Mr Adams' headquarters will be in Charlotte, N C.

W H LEON, formerly a sales representative for the Industrial Chemicals Division in the Mid-West, was named Western District Manager for the Heavy Chemicals Department. Mr Leon, with headquarters in Chicago, will supervise sales of the department in the Middle and Far West.

W H SPREEN has been appointed Midwestern District Sales Manager for Heyden Chemical Corporation with headquarters at Heyden's Chicago branch office. Mr Spreen has been manager of Heyden's Detroit, Michigan branch office since 1945.

R Gow

REICHHOLD CHEMICALS, INC, New York, N Y, announced on November 6 the appointment of ROBERT GOW as sales manager of the firm's newly-created Textile Division, with offices at Charlotte, N C.

Prior to joining the Reichhold organization, Mr Gow was engaged in sales development of synthetic resins for textile finishing and sizing with Monsanto Chemical Co for seven years. Before his wartime service with the Army Air Forces, he was associated with Lanett Bleachery and Dyeworks, West Point, Ga.

Reputedly the world's largest producer of synthetic resins, with 10 domestic and 19 foreign plants, Reichhold has heretofore done only a slim portion of its $100 million annual sales volume within the textile industry. The company announced in August of this year, however, that it is about to produce an expanded line of finishing and sizing resins at Charlotte, while carrying forward its research there on antistatic, delustering, detergent and sequestering agents for both natural and synthetic textiles.

BM JONES recently resigned his position with the Rodney Hunt Machine Co, where he was Manager of the Textile Machinery Division for several years. More recently he held the position of General Sales Manager.

HENRY A WELLS, formerly assistant service manager of the Textile Colors Division, Interchemical Corporation, has been appointed technical representative in the Southern Sales District with headquarters in Rock Hill, S C. Mr Wells joined the Textile Colors Division in 1948. He began his career in 1933 with Warwick Print Works and later went with Ware Shoals Manufacturing Company and with the Calco Chemical Division, American Cyanamid Company.

D L Fuller

M A Stimola

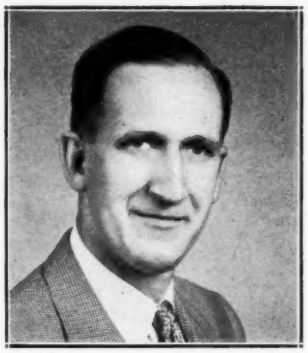
APPOINTMENTS of DONALD L FULLER as Technical Director and MICHAEL A STIMOLA as Industrial Relations Director of American Cyanamid Company's nitrogen products plant now under construction near New Orleans, Louisiana, were announced on November 28 by G J Forney, Plant Manager.

Dr Fuller joined Cyanamid in October after serving as Associate Director of the Central Research Laboratories of General Aniline and Film Corporation, Easton, Pa. He had been with that firm for nine years, with Shell Development Company for four years, and with American Cyanamid Company from 1935 to 1938 as a research chemist at the Company's Stamford Research Laboratories.

Mr Stimola joined Cyanamid as a Labor Relations Assistant in 1951. He was formerly with the National Sugar Refining Company and the Retail Credit Company, both in New York.

HERBERT FINEBERG, chief chemist for Glyco Products Co, Inc since 1948, has been promoted to the position of director of research with headquarters at Williamsport, Pa.

Dr Fineberg has previously been a research chemist for the Eastman Kodak Co, chief chemist for the Connecticut Hard Rubber Co and director of The Geral Chemical Company.



E O Ohsol

ERNEST O OHSOL has joined Pittsburg Coke & Chemical Company as director of chemical engineering, where he will be responsible for economic and engineering evaluations of major chemical projects and will supervise development of process design and specifications.

Dr Ohsol was formerly at General Electric Company, Pittsfield, Mass, as manager, new product development laboratory, and before that had been with Esso Research Center of Standard Oil Development Company.

THOMAS E MOFFITT has been appointed western manager of the Hooker Electrochemical Company, and HORACE W HOOKER, JR, western sales manager, succeeding ALBERT H HOOKER who has taken an extended leave of absence on the advice of his physician.

Mr Moffitt's appointment makes him senior executive for all Hooker affairs in the west coast area, including British Columbia. He has been works manager of the Tacoma Plant since October 1951, and previously had served as assistant works manager, assistant sales manager, and as a chemical engineer. Mr Moffitt originally joined Hooker in 1930 and served until 1945. He rejoined the organization in 1950.

HORACE W HOOKER, JR has been associated with the organization since 1934 when he joined the research and development department. In 1940 he had charge of advertising and sales promotion. He was made assistant purchasing agent in 1941 and was appointed general purchasing agent in 1947.

ALBERT H HOOKER has been western sales manager of the company since the establishment of the Tacoma Plant in 1928. He continues as a director of Hooker Chemicals, Limited, a British Columbia corporation, which has acquired 60 acres of industrial property in North Vancouver, British Columbia as a contemplated plant site.

J E Foster

PROFESSOR JOHN E FOSTER assumed the presidency of the New Bedford Textile Institute on November 1, succeeding GEORGE WALKER whose retirement, after sixteen years as the administrative head of the Institute, became effective on that date.

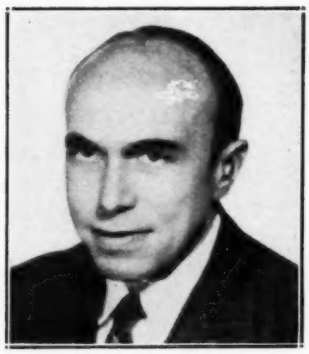
President Foster, a native of New Bedford, is a 1929 graduate in Mechanical Engineering from NBTI. He first joined the New Bedford Textile Institute faculty in 1934 as an instructor in the Mechanical Department. After separation from the service in 1946, Mister Foster returned to NBTI to become head of the Mathematics Department. He became head of the Department of Engineering in 1948 and was appointed Professor of Machine Design and Dean of Students in 1949.

R H Carlson

ATLANTIC CHEMICAL CO, INC has announced the appointment of ROBERT H CARLSON to their sales staff, covering parts of southern New England.

Mr Carlson has gone through a training period in the Development and Sales Service Laboratory for placement on the sales staff.

ROBERT W EVANS has replaced Mr Carlson in the laboratory.



G W Little

GEORGE WESTCOTT LITTLE has been appointed resident manager of the Hartsville, S C, plant of the United States Finishing Company by action of the Company's Board of Directors.

Mr Little began his career in the finishing business as an apprentice in U S Finishing's Silver Spring Branch in 1935. He was later assigned to the Production Dept of the Norwich, Conn, Branch in 1937. From 1938 to 1943 he was plant superintendent of the Hartsville Branch.

Leaving U S Finishing temporarily in 1943, Mr Little went with Pacific Mills for two years as superintendent of printing and dyeing at the Lymen Division. He rejoined USF as superintendent of finishing at Norwich in '45. In 1948 he became general superintendent, a post he filled until this new appointment.

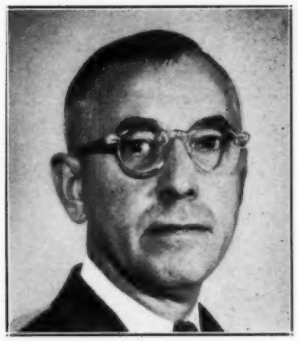
THE retirement of Professor GILBERT R MERRILL as head of the Department of Cotton Yarns and Knitting at the Lowell Textile Institute has been announced by President Martin J Lydon. It is learned, however, that Professor Merrill, who has served as head of the Department for the past quarter century, will serve in an advisory capacity and continue to teach courses in cotton manufacturing.

Assistant Professor JOHN A GOODWIN has been named acting head of the Department and will assume immediate administrative duties.

THE association of ALFRED E HAMPSHIRE with the Organic Chemical Corporation of East Providence, R I, became effective November 1, 1952.

Mr Hampshire joins the Organic Chemical Corporation as technical director and demonstrator in the application of vat, naphthol and other dyestuffs to cotton, rayon, and nylon fibers. Mr Hampshire for the past 17 years has been employed by the Lincoln Bleach and Dye Works of Lonsdale, R I, now a division of Textron Inc. He was also previously employed as superintendent of dyeing in Pontiac Bleachery, Bradford Dyeing Association, and Southbridge Finishing Corp.

Mr Hampshire's territory will include most of New England and the Southern States.



A E Hampshire

BERT CREMERS, vice president, Michigan Alkali Division, Wyandotte Chemicals Corporation, recently announced the following divisional promotions in the home office: C F SANBORN to manager sales research and control; F M ZORN to manager, order and scheduling department; M D THOMPSON to assistant director of traffic.

Mr Sanborn's new department encompasses the former market research and sales control departments. Brought about by Wyandotte's increasing marketing activities, this new department more fully integrates the sales program. Mr Sanborn came to Wyandotte in 1941. Upon returning to Wyandotte from military service he worked as a market analyst and in 1951 was appointed manager of the market research department.

In his new capacity, Mr Zorn is in charge of order and scheduling activities for the division's products. Formerly assistant to the product manager of heavy alkalis and chlorine, Mr Zorn is a Wyandotte veteran of 13 years.

M D Thompson has over 38 years experience with traffic and transportation problems, 12 of them with Wyandotte.

C F Sanborn

K C LOUGHLIN, vice president of Celanese Corporation of America, was named general manager of the textile division on November 3 with full responsibility for management of the textile activities of the company. This, together with several other appointments, completes the organization program of the division.

J GUYTON BOSTON has been elevated to general sales manager of the division, the position relinquished by Mr Loughlin for his broader duties. Previously, Mr Boston has been sales manager of acetate filament yarn.

R T ARMSTRONG, associate director of the Summit, New Jersey, research laboratories, was promoted to the new position of technical director of the division. He will direct and coordinate all research and development activities of the division.

GEORGE B HUGHEY, KENNETH JOHNSON, PAUL D EMERSON, GEORGE KAZAN, JR, and MICHAEL KWASIN have been appointed to supervisory positions at the Chemstrand Corporation nylon manufacturing and processing plant now under construction at Pensacola, Florida.

The announcement was made on October 30th by Roy G Hemminghaus, plant manager. The appointees will reside at Pensacola at a later date.

Dr Hughey becomes area technical supervisor of intermediate operations; Dr Johnson, textile area superintendent; Mr Emerson, area technical superintendent of yarn operations; Mr Kazan, area superintendent of the adipic acid plant; and Mr Kwasin, superintendent of the adiponitrile and diamine areas.

THE Board of Directors of the Research Foundation at Lowell Textile Institute has announced the appointment of BASIL G SKALKEAS as the Foundation's Director of Research. He is a former employee of the Monsanto Chemical Company, and came to the Institute in 1949 as a Research Fellow under the Department of Agriculture of the Federal Government.

In taking up his duties as Director of Research, Mr Skalkeas becomes active head of all of the research activities carried on at the Institute, and will serve as the liaison between the Research Foundation and industry and government agencies.

OBITUARY

W T McWhorter

WTROY McWHORTER, sales representative, Dyestuff Department, American Cyanamid Company, Calco Chemical Division, Charlotte District, died on November 9, while attending the annual meeting of American Association of Textile Chemists and Colorists at Boston.

Burial services were held in Atlanta.

Mr McWhorter made his home at 2101 Queens Road, West Charlotte, N C. He was born on April 17, 1903, and received his BS degree in textile engineering from Georgia School of Technology in 1924. During World War II he served as a major in the artillery. He was a member of Delta Tau Delta, Poinsett Club, Greenville, S C, and the AATCC.

His widow, the former Marie Williams, is the daughter of Colonel and Mrs Richard H Williams now in The Hague, Netherlands. Colonel Williams was Chief of Intelligence for the Army of Occupation in Germany in World War I.

JOHN J McCLOSKEY

JOHN J McCLOSKEY, 32, of Charlottesville, Virginia died suddenly on Sunday, October 26.

At the time of his death, he was technical sales representative for Nopco Chemical Company in the Virginia-Maryland area. He had been associated with Nopco since 1946.

HAROLD EDWARD McNAB

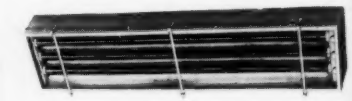
HAROLD E McNAB, 45, an official in the Mac Chemical Company, Knoxville, Tenn, died suddenly on November 21st after helping his neighbors push their stalled cars out of the snow in front of his home.

Mr McNab is survived by his widow; a son, Harold Russell; a daughter, Mary N McNab; two brothers, William S (a partner in Mac Chemical Co) and Walter; and a sister, Jessie Mae McNab.

Equipment—

(concluded from 838)

The manufacturer states that Blak-Ray tubes are rated at 3000 hours, burn cool, start instantly, and may be turned on and off at will with no warm-up period for reaching peak ultra-violet emission and no cooling-off period required before restarting.



Blak-Ray Ultra-Violet Source

UTILITY WARMER PLATE
(Labline)

This thermostatically controlled warmer plate may be used for keeping solutions at desired temperatures, for evaporations below boiling point, or as a utility heating plate for surface temperatures from room to 100° C.

Features: Large size working surface, 24" long x 6½" wide. Thermostatically controlled, sensitivity ± 1° C. Built-in thermometer indicates operating temperatures. Woven mat-type, low wattage density heater guaranteed by the manufacturers for 10 years, assures even heat. Temperature control knob has dial with reference points, gives selective control for desired temperature. Metal cover protects unit when not in use. Finished in grey hammerloid. 115 V. 50-60 Cycles, 300 Watts.

UNIVERSAL SPEED BRIDGE
(Weiller)

This type of Speed Bridge is intended to indicate temperatures to .001 degrees C over restricted range.

It is provided with a 1,000 division, 10-turn slide wire. If the range is made 1 degree, one division will indicate a temperature change of approximately .001 degree.

New bridge arms can be plugged in to change the range. The significant bridge arms are located under a hood with a heater and thermostat to keep them at the same temperature.

Speed Bridge BU-1000 is said to be as rugged and stable as the other members of the Speed Bridge family. It is, however, provided with an amplifier of slightly higher gain and a more sensitive null indicating meter.

It is contained in a steel case 7 x 8 x 12, with a bakelite veneer panel. Power supply is 115 volts, 60 cycles AC. Weight of instrument: 15 pounds.

lak-Ray
rn cool,
on and
riod for
on and
fore re-

ce

warmer
olutions
orations
heating
n room

ace, 24"
lly con-
in ther-
eratures.
density
acturers
empera-
eference
desired
cts unit
ammer-
tts.

ntended
degrees

division,
is made
licate a
ely .001

gged in
gnificant
a hood
o keep

o be as
nembers
s, how-
ifier of
sensitive

8 x 12,
ver sup-
eight of

8, 1952